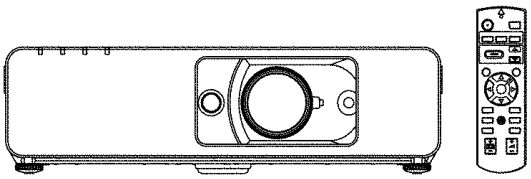
ORDER NO. VED0704376C0
D10

Service Manual

LCD Projector



PT-F100NTU
PT-F100NTE
PT-F100NTEA
PT-F100U
PT-F100E
PT-F100EA

Panasonic

© 2007 Matsushita Electric Industrial Co., Ltd. All rights reserved. Unauthorized copying and distribution is a violation of law.

The service technician is required to read and follow the "Safety Precautions" and "Important Safety Notice" in this service manual.

Specifications

Power supply: 100 V - 240 V AC, 50 Hz / 60 Hz
Power consumption:
330 W [During standby (when fan is stopped): Approx. 3 W]
Amps: 3.9 A - 1.4 A
LCD panel:
Panel size (diagonal): 0.7 type (17.78 mm)
Aspect ratio: 4:3
Display method: 3 transparent LCD panels (RGB)
Drive method: Active matrix method
Pixels: 786 432 (1 024 × 768) × 3 panels
Lens:
Manual zoom (2x) / Manual focus
F 1.7 - 2.6, f 21.6 mm - 43.0 mm
Lamp: UHM lamp (250 W)
Luminosity: 3 200 lm
Operating environment:
Temperature: 0° C - 40° C
(when the HIGHLAND is set to "ON" : 0° C - 35° C)
Humidity: 20 % - 80 % (no condensation)
Scanning frequency (for RGB signals):
Horizontal scanning frequency: 15 kHz - 91 kHz
Vertical scanning frequency: 50 Hz - 85 Hz
Dot clock frequency: 108 MHz or less
COMPONENT (YP_BP_R) signals:
480i, 480p, 576i, 576p, 720/50p, 720/60p 1 080/50i,1 080/60i
Color system:
7 (NTSC / NTSC 4.43 / PAL / PAL-M / PAL-N / PAL60 / SECAM)
Projection size: 838.2 mm - 7 620 mm
Throw distance: 1.2 m - 18.1 m
Screen aspect ratio: 4:3
Installation(Menu selection method)**:**
FRONT/DESK, FRONT/CEILING, REAR/DESK, REAR/CEILING
Speakers:
4.0 cm × 1
Max. usable volume output:
3 W
Connectors:
S-VIDEO IN: Single-line, Mini DIN 4p
Y: 1.0 V [p-p], C: 0.286 V [p-p], 75 Ω
VIDEO IN: Single-line, RCA pin jack
1.0 V [p-p], 75 Ω
COMPUTER1 IN: Single-line, D-sub HD 15-pin (female)
RGB: 0.7 V [p-p], 75 Ω
HD, VD/SYNC: TTL high impedance, automatic positive/negative polarity compatible
COMPUTER2 IN/1 OUT:
Single-line, D-sub HD 15-pin (female)
Selectable for input and output by menu operation.
RGB: 0.7 V [p-p], 75 Ω
HD, VD/SYNC: TTL high impedance, automatic positive/negative polarity compatible
COMPONENT IN:
Y, P_B/C_B, P_R/C_R: Single-line, RCA pin jack x 3
Y: 1.0 V [p-p] (Including sync), 75 Ω
P_B/C_B, (P_R/C_R): 0.7 V [p-p], 75 Ω
AUDIO IN:
Single-Line, RCA pin jack × 2 (L-R)
0.5 V [rms]
COMPUTER AUDIO IN:
Dual-Line, M3 jack (Stereo MINI)
0.5 V [rms]
VARIABLE AUDIO OUT:
Single-Line, M3 jack (Stereo MINI)
0.5 V [rms]
(Monitor output/stereo compatible)
0 V [rms]-2.0 V [rms] (variable)
SERIAL: D-sub 9-pin RS-232C compatible
REMOTE: D-sub 9-pin For external control
LAN (RJ-45): Single-Line, For network connection
10 Base-T/100Base-TX/1000Base-T
Wireless LAN:
Compatible: IEEE802.11b/IEEE802.11g
(Wireless LAN standard protocol)
Wireless channel:
IEEE802.11b/IEEE802.11g: 1-13 channels
Distance: 30 m Depends on the usage environment
Cabinet:
Molded plastic (PC+ABS)
Dimensions:
Width: 432 mm
Height: 124.5 mm
Length: 319 mm
Weight:
6.2 kg
Certifications:
PT-F100NTU, F100U:
UL60950-1, C-UL, FCC Class B
PT-F100NTE/EA, F100E/EA:
EN60950-1, EN55022, EN61000-3-2, EN61000-3-3, EN55024

＜**Remote control unit**＞

Power supply:
3 V DC (AA battery × 2)
Operating range:
Approx. 10 m
(when operated directly in front of signal receptor)
Dimensions: Width: 48 mm
Height: 24.5 mm
Length: 163 mm
Weight: 117 g (including battery)
Accessories:

Remote control unit	
PT-F100NT** (N2QAYB000152):	1
PT-F100** (N2QAYB000154):	1
AAA battery for remote control unit (x2) :	1
Power cord:	
PT-F100NTU/F100U:	
K2CG3DH00053	1
PT-F100NTE/F100NTE:	
K2CM3DH00015 (continental)	1
PT-F100NTEA/F100EA:	
K2CT3DH00029 (U.K)	1
K2CM3DH00015	1
CD-ROM (PT-F100NT** only)	
TQBH9009	1

Options:
Ceiling bracket: ET-PKF100H/ET-PKF100S
AV Cable: TY-SC10CP

- Specifications are subject to change without notice.
- Weight and dimensions shown are approximate.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Trademark Acknowledgements

- VGA and XGA are trademarks of International Business Machines Corporation.
- S-VGA is a registered trademark of the Video Electronics Standards Association.
- The font used in the on-screen displays is a Ricoh bitmap font, which is manufactured and sold by Ricoh Company, Ltd.

All other trademarks are the property of the various trademark owners.

CAUTION
Lithium Battery
Risk of explosion if battery is replaced by an incorrect type. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.
(See also Operating Instructions.)

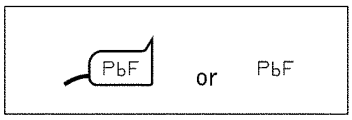
Precaution
If using of this projector at high elevations (above 1 400 m), set HIGHLAND to ON. (Refer to "Option settings" in Operating Instructions.)
Failure to observe this may cause malfunctions.
Never use this projector at an elevation of 2 700 m or higher.
Using this projector at high elevations, consult your dealer or Authorized Service Center about preparations.

About lead free solder (PbF)

This projector is using the P.C.Board which applies lead free solder. The use of lead free solder is recommended from the standpoint of antipollution for the global environment in service.
Notes:

- Lead free solder: Sn-Ag-Cu (tin, silver and copper) has a higher melting point (approx. 217°C) than standard solder. Typically, the melting point is 30°C to 40°C higher. When servicing, use a high temperature soldering iron with temperature limitation function and set it to 370±10°C.
- Be precautious about lead free solder: Sn-Ag-Cu (tin, silver and copper) will tend to splash when heated too high (approx. 600°C or higher).
- Use lead free solder for the P.C.Board (specified on it as "PbF") which uses lead free solder. (When you unavoidably use lead solder, use lead solder after removing lead free solder. Or be sure to heat the lead free solder until it melts completely, before applying lead solder.)
- After soldering to double layered P.C.Boards, check the component side for excess solder which may flow onto the opposite side.

About the identification of the lead free solder P.C.Board
For the P.C.Board which applies lead free solder, the symbol as shown in the figure below is printed or stamped on the surface or the back of P.C.Board.



For US

IMPORTANT SAFETY NOTICE

There are special parts used in Panasonic LCD Projectors which are important for safety. These parts are shaded on the schematic diagram. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of PANASONIC BROADCAST & TELEVISION SYSTEMS COMPANY.

WARNING:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Any unauthorized changes or modifications to this equipment will void the users authority to operate.

CONTENTS

Page

1 Safety Precautions 5
1.1. General Guidelines 5
1.2. Leakage Current Check 5
1.3. UV Precaution and UHM Lamp Precautions 5
2 Ext Option 6
2.1. Procedure to enter EXT OPTION 6
2.2. EXT OPTION Menu and Functions 6
2.3. Canceling EXT OPTION 7
3 Self-Check Mode 7
3.1. Procedure to enter the self-check mode 7
3.2. Self Check Display and Contents 8
3.3. Canceling the self-check mode 9
4 Test Pattern 9
4.1. Procedure to display test patterns 9
4.2. Canceling the test pattern display 9
5 Flicker Adjustment Mode 9
5.1. Procedure to enter the adjustment mode 9
5.2. Adjustment Display and Contents 9
5.3. Canceling the flicker adjustment mode 9
6 Using the SERIAL Connector 10
6.1. Connection 10
6.2. Pin Layout and Signal Names for SERIAL Connector 10
6.3. Communication Settings 10
6.4. Control commands 11
6.5. Communication Cable Specifications 11
6.6. Signal Selector Connecting Cable Specifications 11
7 Disassembly Instructions 12
7.1. Printed Circuit Board and Main Parts Location 12
7.2. Removal of Upper Case 13
7.3. Removal of A-P.C.Board 13
7.4. Removal of D-P.C.Board 14
7.5. Removal of F-P.C.Board 14
7.6. Removal of G-P.C.Board 14
7.7. Removal of K-P.C.Board 14
7.8. Removal of L-P.C.Board 15
7.9. Removal of PI-P.C.Board 15
7.10. Removal of R-P.C.Board 15
7.11. Removal of S1-P.C.Board 15
7.12. Removal of S2-P.C.Board 15
7.13. Removal of Z-P.C.Board 16
7.14. Removal of B/Q-Module 16
7.15. Removal of P-Module 17
7.16. Removal of Lamp Unit 17
7.17. Removal of Analysis Block and Projection Lens 17
7.18. Removal of LCD Block 18
7.19. Replacement of LCD Panel (B) 18

Page

7.20. LCD Panel Discrimination 19
7.21. LCD Panel Combination 19
7.22. Replacement of Incidence Polarizer (G) 19
7.23. Replacement of Incidence Polarizer (R and B) 20
7.24. Replacement of Projection Polarizer 20
7.25. Replacement of PBS Array (Analysis Block) 21
7.26. Removal of ARF (Auto Rolling Filter) Unit 21
7.27. Removal of ARF Drive Unit 21
8 Measurement and Adjustments 22
8.1. Adjustment Procedure Flowchart 22
8.2. Cautions for Adjustment 22
8.3. Setting Before Adjustment 22
8.4. Convergence Adjustment 22
8.5. Lighting Area Adjustment 24
8.6. Software for Adjustment 26
8.7. Flicker Adjustment 28
8.8. Input Level Adjustment 28
8.9. Model Information Setup 29
9 Troubleshooting 30
10 Interconnection Block Diagram 43
10.1. Interconnection Block Diagram (1/2) 43
10.2. Interconnection Block Diagram (2/2) 44
11 Block Diagram 45
11.1. Power Supply 45
11.2. Signal Processing (1/3) 46
11.3. Signal Processing (2/3) 47
11.4. Signal Processing (3/3) 48
12 Schematic Diagram 49
12.1. A-P.C.Board (1/7) 50
12.2. A-P.C.Board (2/7) 51
12.3. A-P.C.Board (3/7) 52
12.4. A-P.C.Board (4/7) 53
12.5. A-P.C.Board (5/7) 54
12.6. A-P.C.Board (6/7) 55
12.7. A-P.C.Board (7/7) 56
12.8. K-P.C.Board, G-P.C.Board 57
12.9. B-Module (1/2) 58
12.10. B-Module (2/2) 59
13 Circuit Boards 61
13.1. A-P.C.Board (Foil Side) 61
13.2. A-P.C.Board (Component Side) 62
13.3. G-P.C.Board 63
14 Terminal guide of ICs and transistors 65
15 Exploded Views 66
16 Replacement Parts List 70

1 Safety Precautions

1.1. General Guidelines

- For continued safety, no modification of any circuit must be attempted.
- Unplug the power cord from the power outlet before disassembling this projector.
- Use correctly the supplied power cord and must ground it.
- It is advisable to use an isolation transformer in the AC power line before the service.
- Be careful not to touch the rotation part (cooling fan, etc.) of this projector when you service with the upper case removed and the power supply turned ON.
- Observe the original lead dress during the service. If a short circuit is found, replace all the parts overheated or damaged by the short circuit.
- After the service, all the protective devices such as insulation barriers, insulation papers, shields, and isolation R-C combinations must be properly installed.
- After the service, check the leakage current to prevent the customer from getting an electric shock.

1.2. Leakage Current Check

1. Prepare the measuring circuit as shown in Fig.1.

   Be sure to use a voltmeter having the performance described in Table 1.

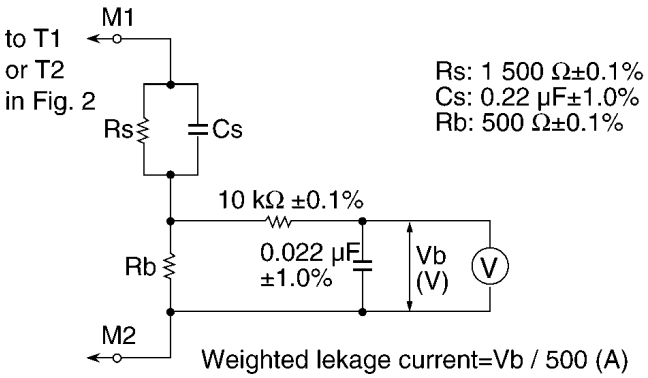


Fig. 1

	Performance
Voltmeter (rms reading)	Accuracy: ≤ 2% Input resistance: ≥ 1 MΩ Input capacitance: ≤ 200 pF Frequency range: 15 Hz to 1 MHz

Table 1

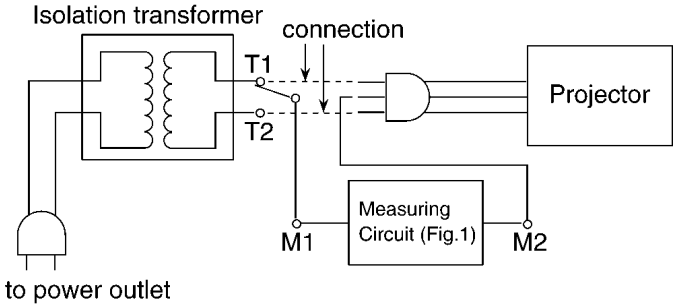


Fig. 2

2. Assemble the circuit as shown in Fig. 2. Plug the power cord in a power outlet.
3. Connect M1 to T1 according to Fig. 2 and measure the voltage.
4. Change the connection of M1 from T1 to T2 and measure the voltage again.
5. The voltmeter must read 0.375 V or lower in both of steps 3 and 4. This means that the current must be 0.75 mA or less.
6. If the reading is out of the above standard, the projector must be repaired and rechecked before returning to the customer because of a possibility of an electric shock.

1.3. UV Precaution and UHM Lamp Precautions

- Be sure to unplug the power cord from the power outlet when replacing the lamp.
- Because the lamp reaches a very high temperature during its operation, wait until it cools completely when replacing the Lamp Unit.
- The lamp emits small amounts of UV-radiation, avoid direct-eye contact with the light.
- The lamp unit has high internal pressure. If improperly handled, explosion might result.
- Because the high pressure lamp involves a risk of failure, never touch the lamp wire lead during the service. (See Fig. 3)

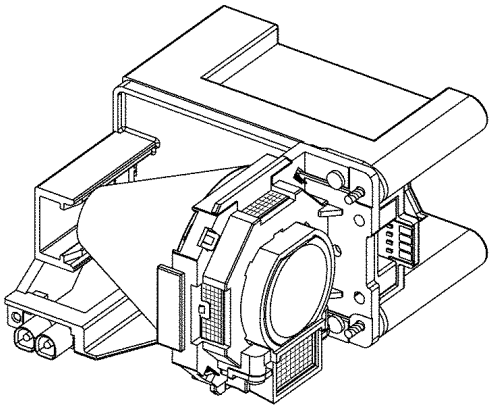


Fig.3

2 Ext Option

This projector has EXT OPTION in addition to standard on-screen menus.

・There are SELF CHECK and TEST PATTERN for service, etc.

2.1. Procedure to enter EXT OPTION

1. Press "MENU" button on the main unit or remote control unit to display "MENU" screen, then select "OPTION" and press "ENTER" button.
2. Select "INPUT GUIDE" on "OPTION" menu and press "ENTER" button 3 seconds or longer.

   MENU → OPTION → INPUT GUIDE

2.2. EXT OPTION Menu and Functions

EXT OPTION

FREEZE MESSAGE	OFF / ON
FAN FULL MODE	OFF / ON
AUTO SETUP	STANDARD / SPECIAL
SYNC	STANDARD / SPECIAL
VGA60/480p	AUTO/VGA60/480p
HPLL	OFF / ON
EMULATE	DEFAULT/TYPE1/TYPE2/OTHER
AUDIO IN STANDBY*1	OFF / ON
OVER SCAN*1	1 / 2
MENU LOCK*1	OFF / ON
MENU LOCK PASSWORD*1	
ARF ROLL	
SELF CHECK	
TEST PATTERN	
FLICKER ADJUST	

*1 AUDIO IN STANDBY, OVER SCAN, MENU LOCK and MENU LOCK PASSWORD are available for the main microprocessor software version 2.02 or later.

・FREEZE MESSAGE

Switching ON/OFF "FREEZE" on-screen display

・FAN FULL MODE

Setting the cooling fan motor rotation speed

– Switching ON "FAN FULL MODE", the rotation level of the fan becomes high-speed rotation (fixed). Moreover, when "FAN FULL MODE" is ON, changing "HIGHLAND" in OPTION becomes impossible (setting "FAN FULL MODE" is given priority more than "HIGHLAND").

・AUTOSETUP

Setting AUTO SETUP mode

– STANDARD: To set the normal mode (the dot clock is adjusted strictly))

– SPECIAL: To set the special mode (the dot clock is adjusted roughly)

Note:

– Do not change the initial setting (STANDARD).

・SYNC

Setting SYNC processing mode

– STANDARD: To set the normal mode

– SPECIAL: To set the special mode (noise reduction mode)

Note:

– Do not change the setting when it is possible to receive normally.

Change the setting only when the image is not displayed normally because of the sync signal noise of connected equipment.

・VGA60/480p

– AUTO: Switching RGB of VGA60 and 480p automatically

– VGA60: Inputting signals in 59.9Hz / VGA480

– 480p: Inputting signals in RGB of 480p

・HPLL

When non-standard signal of VIDEO/S-VIDEO is inputted (VTR, VHD, etc.), horizontal synchronization might be disordered

according to connected equipment. In this case, set HPLL to OFF.

・EMULATE

Switching the operation of RS-232C command to communicate with models other than F100 series.

– DEFAULT: F100/F100NT standard, D3500

– TYPE1: L730/L780/L735/LB/LC series

– TYPE2: L785

– OTHER: Models other than the above-mentioned (Consult your dealer or Authorized Service Center for details.)

・AUDIO IN STANDBY

Setting the audio output when STANDBY

– OFF: Does not output it.

– ON: Outputs it.

Note:

– When setting it to "ON", audio source of the input channel when the power supply is turned off (switched to STANDBY) is outputted. Do with the remote control unit, control panel or RS-232C communication when you switch the channel. The audio volume can be adjusted by the remote control unit or RS-232C communication.

・OVER SCAN

Setting the rate of over scanning

– 1: Approx. 6%

– 2: Approx. 4%

Note:

– Normally, set it to "1".

・MENU LOCK

Switching ON/OFF "MENU LOCK" function

– OFF: Accessible to MENU

– ON: The access to MENU is restricted (The password is required).

– When MENU LOCK is set to "ON", the password input screen is displayed when it accesses the menu, and the adjustment in the menu item is locked.

・MENU LOCK PASSWORD

Setting the password into MENU LOCK

– The default password is "AAAA".

When you want to reset the password into the default password, do the following operation.

1. Press on the remote control unit the AUTO SETUP button, or on the main unit the INPUT SELECT button and the ▲ button at the same time for 2 seconds or more.
2. Press ▼ button for 2 seconds or more.

・ARF ROLL

Rolling the ARF (Auto Rolling Filter) compulsorily.

・SELF CHECK

To enter the self-check mode

・TEST PATTERN

To display test patterns

・FLICKER ADJUST

To enter the flicker adjustment mode

2.3. Canceling EXT OPTION

Press "MENU" button on the main unit or remote control unit.

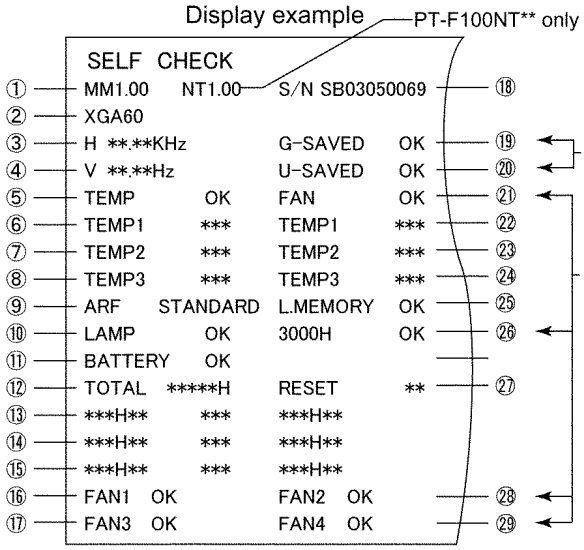
3 Self-Check Mode

This mode is used to narrow down the location of the failure.

3.1. Procedure to enter the self-check mode

Select "SELF CHECK" on "EXT OPTION" menu and press "ENTER" button on the main unit or remote control unit.

3.2. Self Check Display and Contents



* This display is an example and the display contents depend on the input signal mode.

- The result of items "G SAVED" and "U SAVED", "OK" is displayed for OK and "NG" is displayed for NG.
- The result of items "TEMP", "FAN", "FAN1", "FAN2", "FAN3", "FAN4", "LAMP" and "3000H", the OK display becomes red characters when shutting down because abnormality happened last time.

	Display Contents	Remarks	
①	Software Version	Main microcomputer and Network microcomputer (PT-F100NT* only) software version	
②	Signal discrimination: Resolution name	Input signal name (Displays "No-Sync" when no signal input.)	
③	Horizontal Signal Frequency	RGB or YP_BP_R signal reception only	
④	Vertical Signal Frequency		
⑤	Temperature Abnormality Check	Cause of Lamp Malfanction	
⑥	Exhaust Air Thermosensor Measurement Value *1	Around Air Outlet (A/D conversion value: 0 - 255)	
⑦	Intake Air Thermosensor Measurement Value *1	Around Air Inlet (A/D conversion value: 0 - 255)	
⑧	Blocked Thermosensor Measurement Value	On the M2-P.C.Board (A/D conversion value: 0 - 255)	
⑨	Kind of ARF	"STANDARD" (Displays "NG" when ARF is not installed.)	
⑩	Lamp - Abnormality Check	Cause of Lamp Malfanction	
⑪	Battery - Abnormality Check	It is distinguished whether B5001 (Part No.: CR2023) on the Z-P.C.Board operates correctly.	
⑫	Total Usage Time	Projector Cumulative Usage Time	
⑬	Lamp ON - Cumulative Usage Time / Frequency	Current	Cumulative Usage Time and ON Frequency of the lamp are shown from the left.
⑭		Second	
⑮		First	
⑯	Power Fan Stop Check	It is distinguished whether the fan operates correctly.	
⑰	Intake Fan Stop Check	It is distinguished whether the fan operates correctly.	
⑱	Product Serial Number	Displays the serial number of this projector.	
⑲	Gamma Correction Data Check	It is distinguished whether gamma data is stored in the flash ROM.	
⑳	Color Unevenness Correction Data Check	It is distinguished whether color unevenness correction data is stored in the flash ROM.	
㉑	Fan Stop Check	Cause of Lamp Malfanction	
㉒	Exhaust Air Thermosensor A/D Conversion Value	Temperature around the air outlet when the last thermal shutdown occurs	
㉓	Intake Air Thermosensor A/D Conversion Value	Temperature around the air inlet when the last thermal shutdown occurs	
㉔	Blocked Thermosensor A/D Conversion Value	Thermosensor measurement value when the last thermal shutdown occurs	
㉕	Communication Check with Lamp Memory	It is distinguished whether IIC communication with EEPROM on the E-P.C.Board is completed.	
㉖	Lamp - Judgment for Cumulative Usage more than 3 000 h	Judgment for Replacement Time of Lamp	
㉗	Lamp - Reset Frequency of Cumulative Usage Time	Reset Frequency	
㉘	Exhaust Fan Stop Check	It is distinguished whether the fan operates correctly.	
㉙	PBS Fan Stop Check	It is distinguished whether the fan operates correctly.	

*1 When detected abnormal temperature (high temperature around the air inlet and/or outlet ports, large difference between temperature around the air inlet/outlet ports), TEMP indicator turned on. If arriving at the critical temperature, the power supply will be shutdown automatically and the indicator will flash.

3.3. Canceling the self-check mode

Press "MENU" button on the main unit or remote control unit.

4 Test Pattern

This projector displays seven kinds of test patterns [Horizontal lines, Vertical lines, Dots, Crosshatch, White cross, Black cross and White (No pattern)] in the four colors (White, Red, Green and Blue).

Note:

- Because the above patterns can be displayed by each color without test equipment such as PC or SG, use it for simplified adjustments by your eyes and so on.

4.1. Procedure to display test patterns

Select "TEST PATTERN" on "EXT OPTION" menu and press "ENTER" button on the main unit or remote control unit.

Note:

- On the test pattern screen, pressing the up-arrow " ▲ " or down-arrow " ▼ " button allows the test pattern selection and the left-arrow " ◀ " or right-arrow " ▶ " button the color selection (White / Red / Green / Blue).

4.2. Canceling the test pattern display

Press "MENU" button on the main unit or remote control unit.

5 Flicker Adjustment Mode

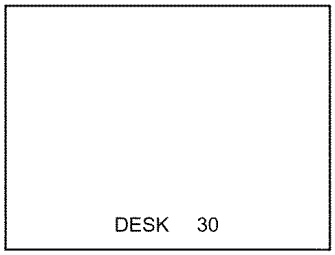
If replacing the optical parts (LCD Panel / LCD block) of this projector and/or A-P.C.Board (assembly), enter the flicker adjustment mode and minimize the flicker.

5.1. Procedure to enter the adjustment mode

Select "FLICKER ADJUST" on "EXT OPTION" menu and press "ENTER" button on the main unit or remote control unit.

Note:

"DESK setting (blue)" is displayed when entering the adjustment mode.



Adjustment Display when DESK setting

5.2. Adjustment Display and Contents

- Setting value is increased and decreased with the right-arrow " ▶ " and left-arrow " ◀ " buttons.
  " ◀ ": Decrease, " ▶ ": Increase
  – Adjust the setting value to minimize the flicker on the screen.
  – Execute the adjustment by 6 patterns below.
- The pattern (adjustment display) is switched with the up-arrow " ▲ " and down-arrow " ▼ " buttons.
  " ▲ ": Forward direction, " ▼ ": Reverse direction
  – There are 6 patterns of "DESK setting (blue)", "DESK setting (red)", "DESK setting (green)", "CEILING setting (blue)", "CEILING setting (red)" and "CEILING setting (green)".
  – The setting value is saved into this projector when the pattern is switched.

5.3. Canceling the flicker adjustment mode

Press "MENU" button on the main unit or remote control unit.

Note:

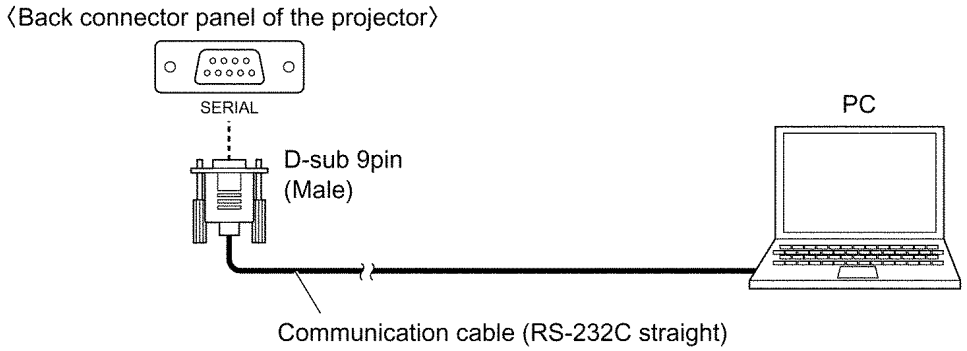
When "MENU" button is pressed, the setting value at that time is saved into this projector and the adjustment mode is canceled.

6 Using the SERIAL Connector

The serial connector which is on the back connector panel of the projector conforms to RS-232C standard. This projector can be controlled by a PC which is connected as shown in "6.1. Connection".

For controlling this projector by a PC, requires communication software on the market, and inputs control commands according to Communication Settings and Control Commands below.

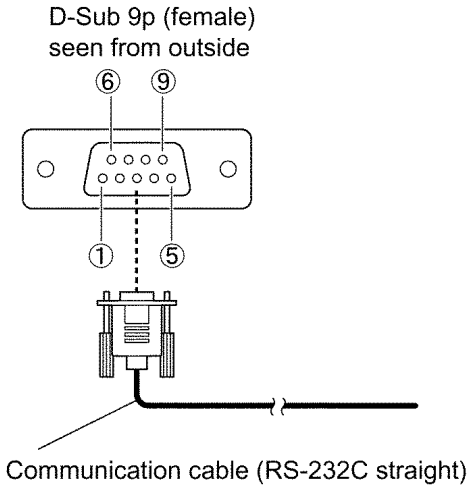
6.1. Connection



Note:

Use a proper communication cable which is suitable for the PC to connect SERIAL connector and the PC.

6.2. Pin Layout and Signal Names for SERIAL Connector



Pin No	Signal Name	Contents
1	---	NC
2	TXD	Transmit data
3	RXD	Receive data
4	---	NC
5	GND	Ground
6	DSR	Connected internally
7	CTS	
8	RTS	
9	---	NC

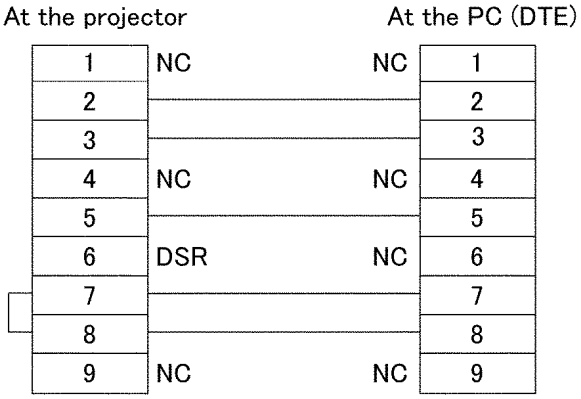
6.3. Communication Settings

Signal Level	Contents		Description
Sync. method	Conforms to RS-232C standard	Asynchronous	Synchronizes every 1 character (8 bits)
Baud rate		9 600 bps	Data transfer speed
Parity		None	Error detection method
Character length		8 bits	Number of bit composing 1 character
Stop bit		1 bit	Uses stop bit when asynchronous method
X parameter		Not used	
S parameter		Not used	

6.4. Control commands

PrintDB
Refer to "Control Commands".

6.5. Communication Cable Specifications



6.6. Signal Selector Connecting Cable Specifications

When connecting to a signal selector (ex. TW-SWS62J), use a cable with specifications below.

Connecting method: Connects a video signal cable from the signal selector to "VIDEO IN", and an RGB signal cable to "COMPUTER 1 IN".

At the signal selector D-sub 9p (male)		At the projector (DCE) D-sub 9p (male)	
Signal Name	Pin No.	Pin No.	Signal Name
NC	1	1	NC
RD Receive data	2	2	SD Transmit data
SD Transmit data	3	3	RD Receive data
NC	4	4	NC
GND Ground	5	5	GND Ground
NC	6	6	DSR
RS Transmit request	7	7	CS Transmit permission
CS Transmit permission	8	8	RS Transmit request
NC	9	9	NC

Note:

Set VP control terminal switch of the signal selector to VP TYPE "B".

7 Disassembly Instructions

Warning:

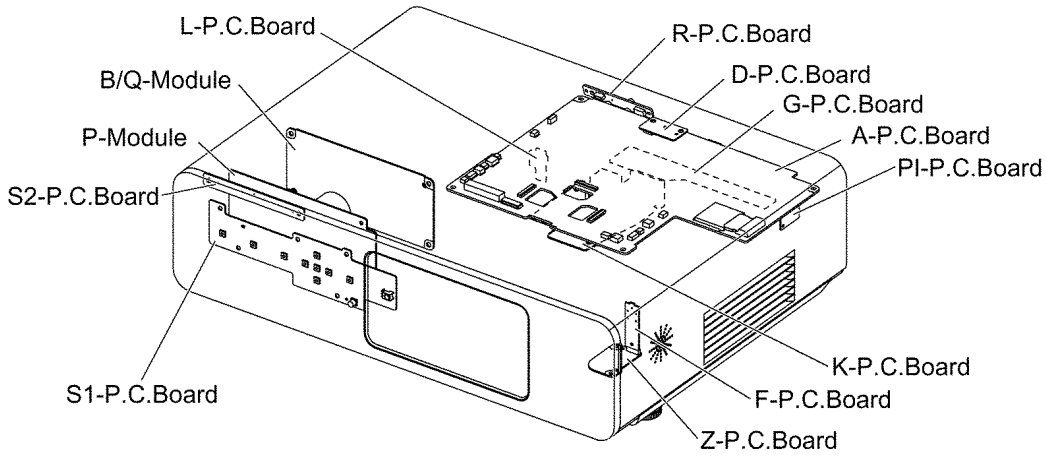
- Be sure to unplug the power cord from the power outlet before disassembling this projector.

Caution:

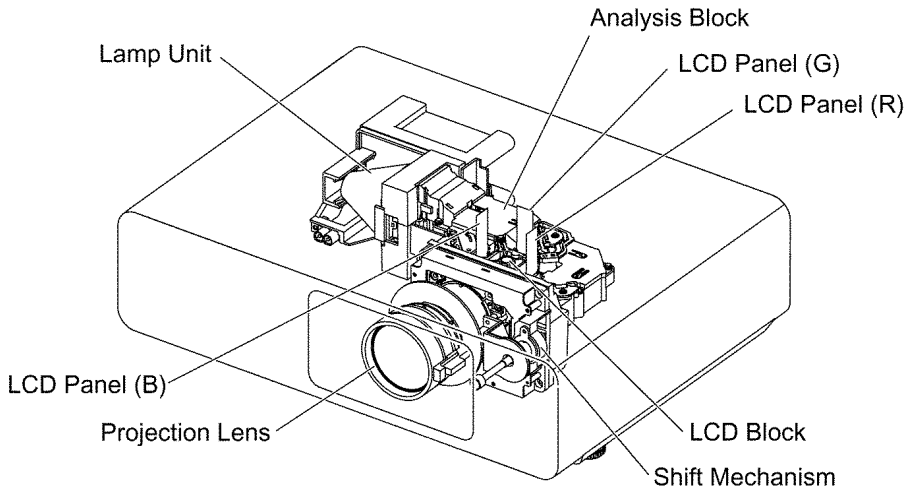
- While turning over a printed circuit board, be sure to put a insulating material under it to prevent a short circuit.
- Printed circuit boards and wires must not be pulled forcibly, but be handled carefully.
- Connectors also must be handled carefully.
- When reassembling, replace used adhesive tape with new one (Do not re-use used tape).
- After repairing this projector, be sure to put back the wires and connectors to the original condition.
- Service or repair the product according to service information on the service manual, etc. so that a fire, injury or electric shock caused by an improper repair may not occur.
  1. Do not modify equipments, components and materials when attempting to service or repair.
  2. Do not repair nor connect wires even in case of a part of the disconnection when the wiring unit is supplied as a replacement parts, replace the wiring unit (complete).
  3. For a fasten terminal (push-in type terminal), pull out or insert straightly without twisting it.
  4. When the fuse has blown, do not turn on the power supply replacing only the fuse because the secondary disaster of fumes, fire or other hazards is expected. Turn on the power supply after doing the confirmation and measures of defective causes (structure and circuit, etc.).
  5. After the service or the repair is completed, confirm the operation of the product is normal.

7.1. Printed Circuit Board and Main Parts Location

Electrical Parts

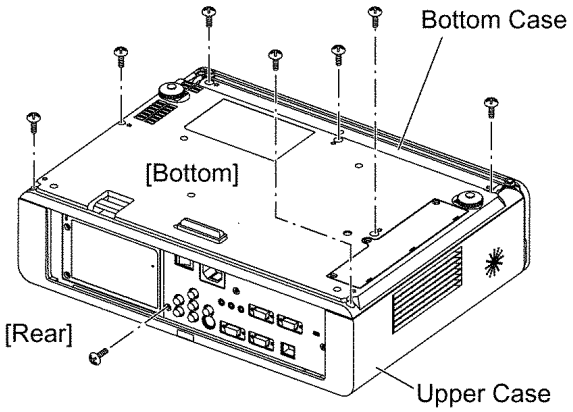


Optical Parts

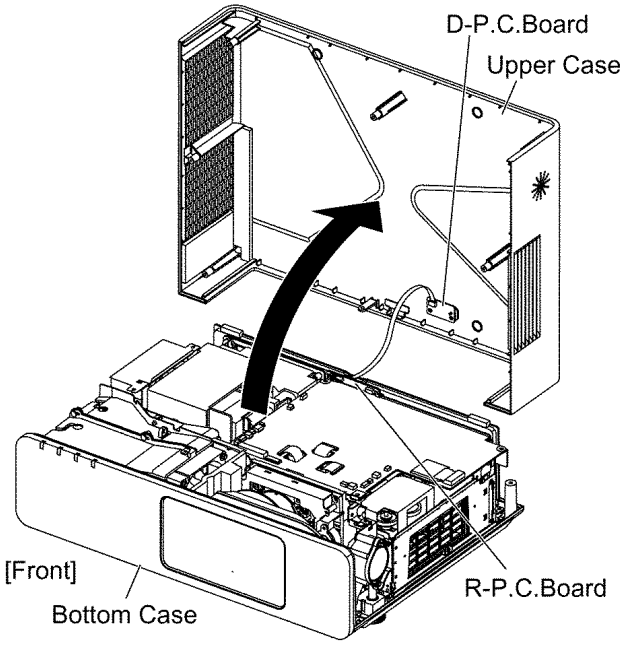


7.2. Removal of Upper Case

1. Turn the projector upside down.
2. Unscrew the 8 screws.

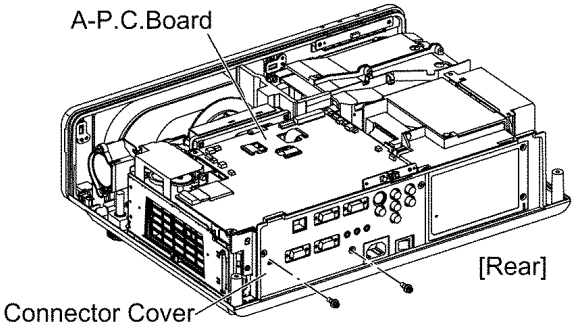


3. Return the projector to the normal position.
4. Lift the upper case upward.
5. Disconnect the flexible cable between D-P.C.Board and R-P.C.Board, then remove the upper case.



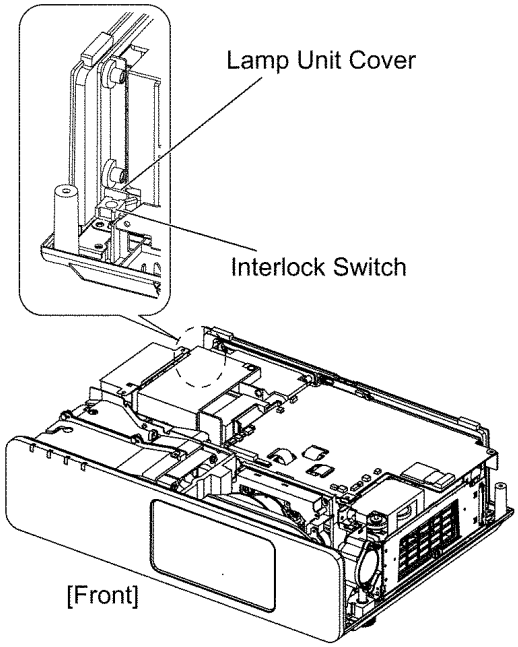
7.3. Removal of A-P.C.Board

1. Remove the upper case according to the section 7.2. "Removal of Upper Case".
2. Unscrew the 2 screws and remove the connector cover.

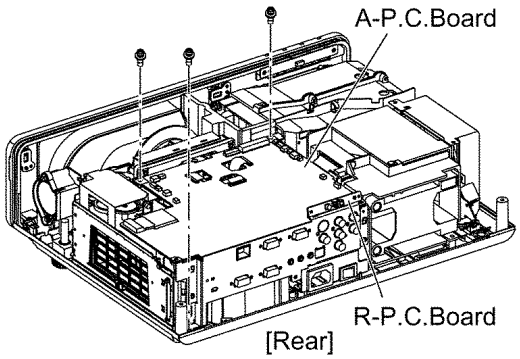


Note:

- When reassembling, confirm the interlock switch is normal status (the switch is in "ON" position).



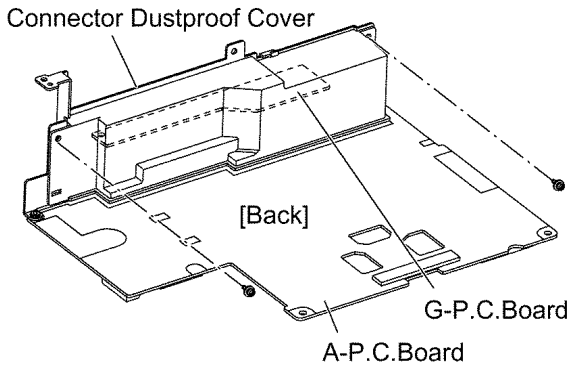
3. Disconnect all connectors of the cables connected with the A-P.C.Board.
4. Unscrew the 3 screws and remove the A-P.C.Board block.



5. Unscrew the 2 screws and remove the connector dustproof cover.

Note:

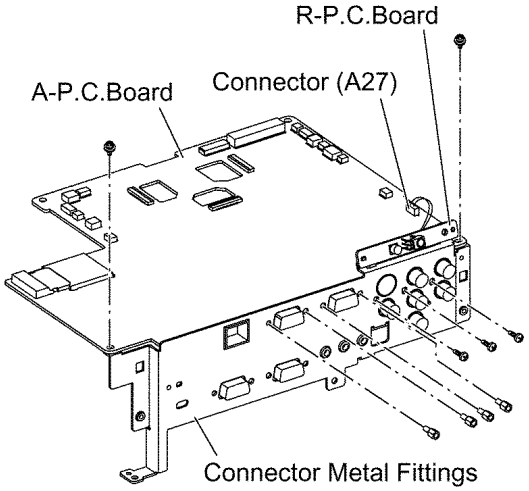
- R-P.C.Board is attached on the connector metal fittings. Be careful with handling.



6. Disconnect the flexible cable between G-P.C.Board and A-P.C.Board (A20).
7. Disconnect the connector between R-P.C.Board and A-P.C.Board (A27).
8. Unscrew the 9 screws and remove the connector metal fittings.

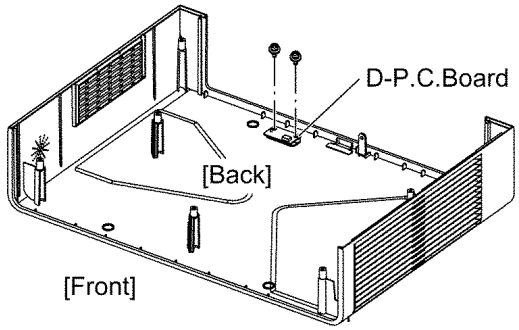
Notes:

- R-P.C.Board and G-P.C.Board are attached on the connector metal fittings. Be careful with handling.



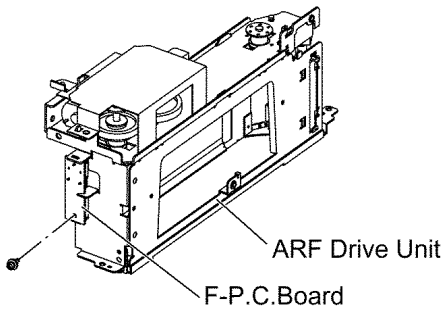
7.4. Removal of D-P.C.Board

1. Remove the upper case according to the section 7.2. "Removal of Upper Case".
2. Unscrew the 2 screws and remove the D-P.C.Board.



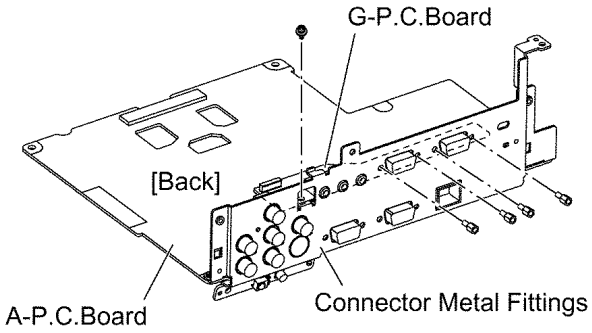
7.5. Removal of F-P.C.Board

1. Remove the ARF drive unit according to the section 7.27. "Removal of ARF Drive Unit".
2. Unscrew the 1 scre remove the F-P.C.Board



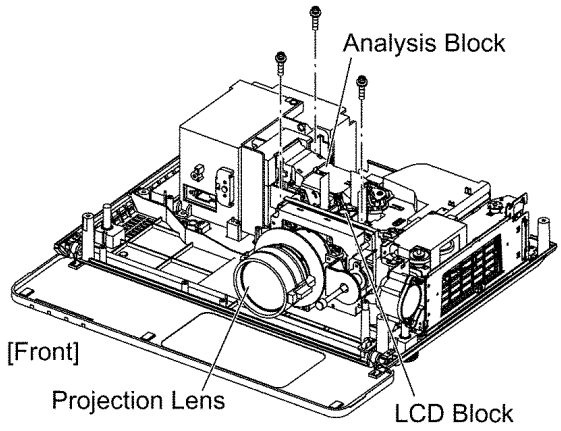
7.6. Removal of G-P.C.Board

1. Remove the A-P.C.Board block according to the steps 1 through 6 in the section 7.3. "Removal of A-P.C.Board".
2. Unscrew the 5 screws and remove the G-P.C.Board.

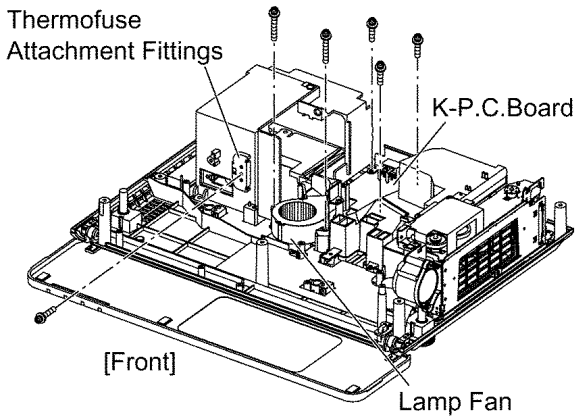


7.7. Removal of K-P.C.Board

1. Remove the lamp unit according to the section 7.16. "Removal of Lamp Unit".
2. Remove the power block according to the steps 1 through 10 in the section 7.14. "Removal of B/Q Module".
3. Unscrew the 3 screws and remove the block of Analysis Block, LCD Block and Projection Lens.

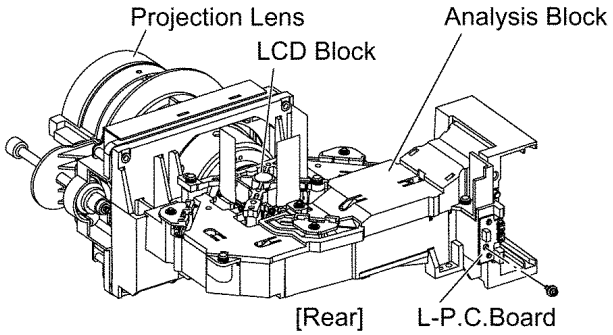


4. Unscrew the 2 screws and remove the lamp fan.
5. Unscrew the 1 screw and remove the thermofuse attachment fittings.
6. Unscrew the 3 screws and remove the K-P.C.Board block.



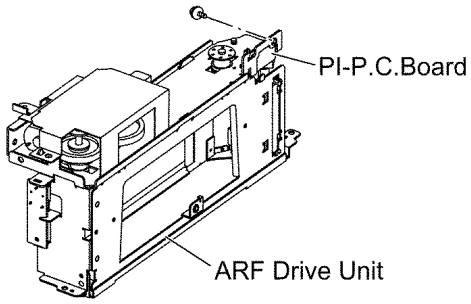
7.8. Removal of L-P.C.Board

1. Remove the block of Analysis Block, LCD Block and Projection Lens according to the steps 1 through 8 in the section 7.17. "Removal of Analysis Block and Projection Lens".
2. Unscrew the 1 screw and remove the L-P.C.Board.



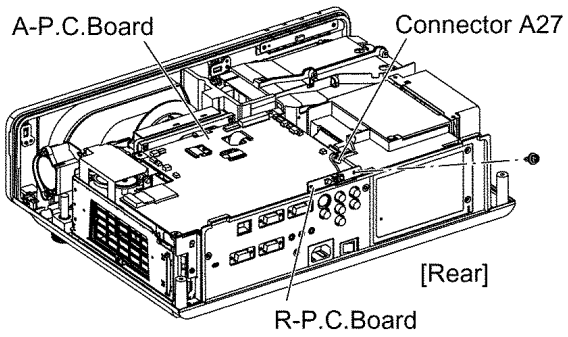
7.9. Removal of PI-P.C.Board

1. Remove the ARF drive unit according to the section 7.27. "Removal of ARF Drive Unit".
2. Unscrew the 1 screw and remove the PI-P.C.Board.



7.10. Removal of R-P.C.Board

1. Remove the upper case according to the section 7.2. "Removal of Upper Case".
2. Disconnect the connector (S4 or A27) between R-P.C.Board and A-P.C.Board.
3. Unscrew the 1 screw and remove the R-P.C.Board.

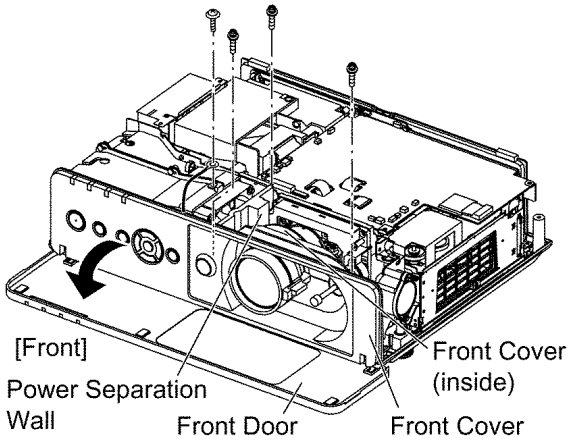


7.11. Removal of S1-P.C.Board

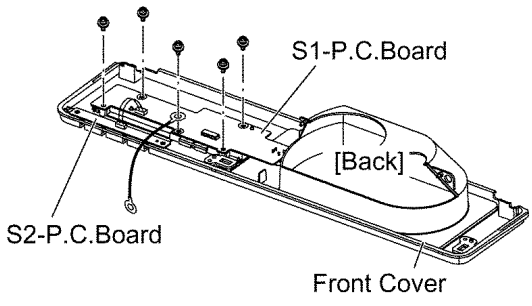
1. Remove the upper case according to the section 7.2. "Removal of Upper Case".
2. Open the front door.
3. Unscrew the 1 screw and remove the front cover (inside).
4. Unscrew the 1 screw and remove the grounding terminal.
5. Unscrew the 2 screws and remove the power separation wall.
6. Remove the front cover.

Note:

・S1-P.C.Board and S2-P.C.Board are attached.



7. Disconnect the connector between S1-P.C.Board and S2-P.C.Board.
8. Unscrew the 5 screws and remove the S1-P.C.Board.

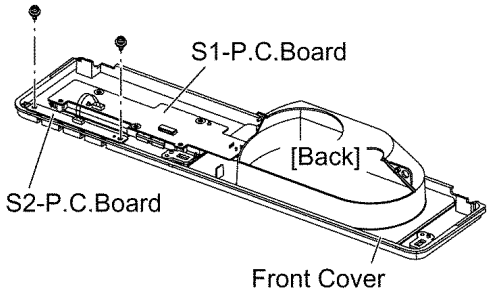


7.12. Removal of S2-P.C.Board

1. Remove the front cover according to the steps 1 through 6 in the section 7.11. "Removal of S1-P.C.Board".
2. Disconnect the connector between S1-P.C.Board and S2-

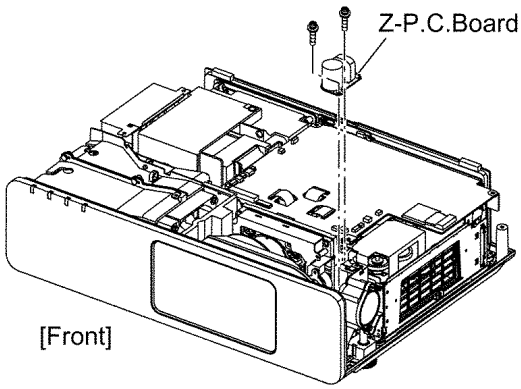
P.C.Board.

3. Unscrew the 2 screws and remove the S2-P.C.Board.



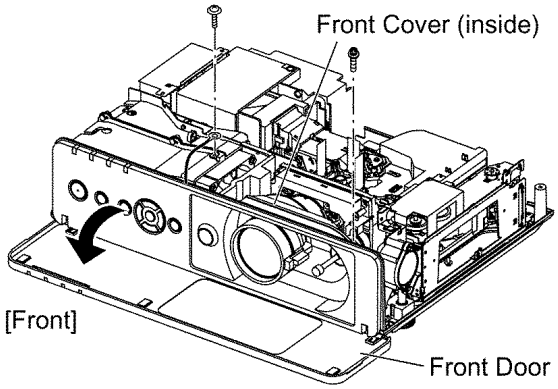
7.13. Removal of Z-P.C.Board

1. Remove the upper case according to the section 7.2. "Removal of Upper Case".
2. Unscrew the 2 screws and remove the Z-P.C.Board.

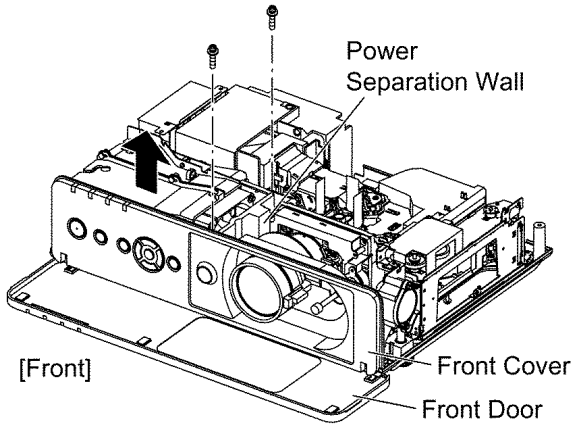


7.14. Removal of B/Q-Module

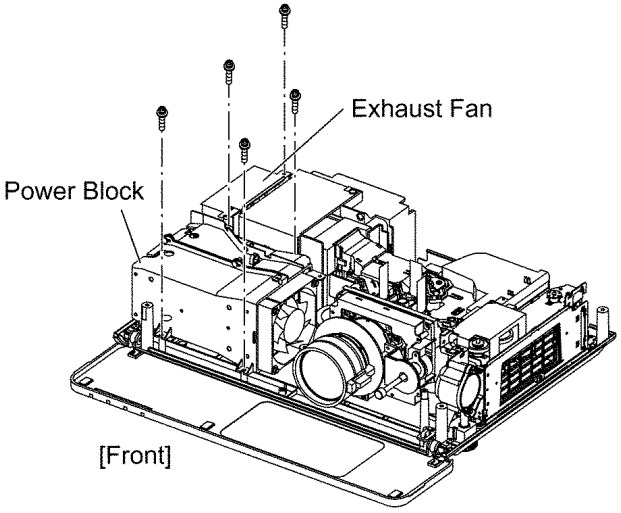
1. Remove the A-P.C.Board block according to the steps 1 through 4 in the section 7.3. "Removal of A-P.C.Board".
2. Open the front door.
3. Unscrew the 1 screw and remove the front cover (inside).
4. Unscrew the 1 screw and release the grounding terminal.



5. Unscrew the 2 screws and remove the power separation wall.
6. Remove the front cover.



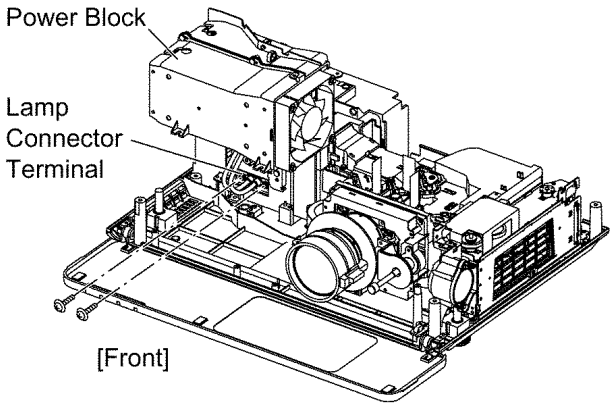
7. Unscrew the 2 screws and remove the exhaust fan.
8. Unscrew the 3 screws.



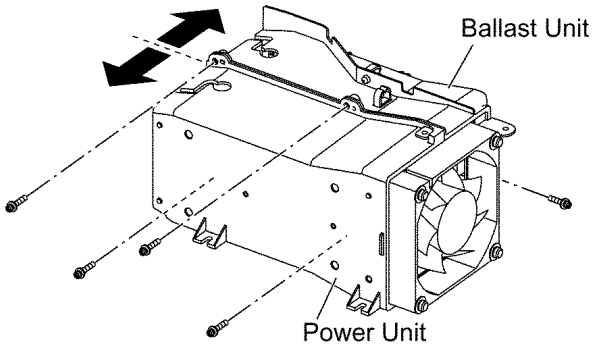
9. Lift the power block and unscrew the 2 screws, then disconnect the lamp connector terminal.

Note:

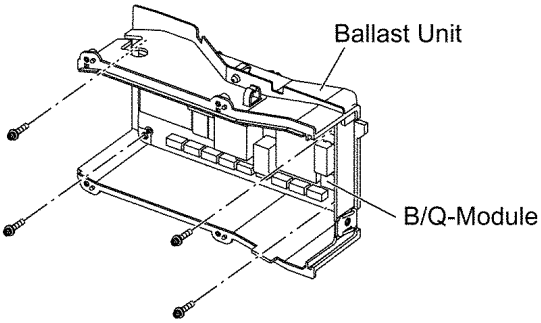
- Because the lead wire between the power block and the lamp connector terminal is short, be careful not to apply excessive force into it.



10. Remove the power block.
11. Unscrew the 5 screws and separate the power unit and the ballast unit.

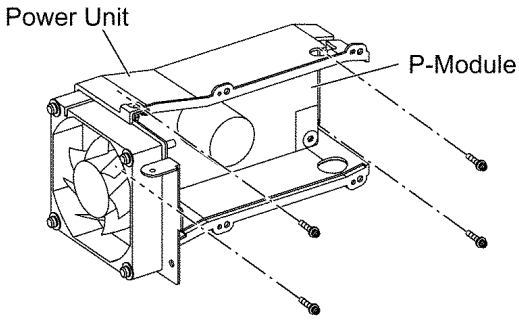


12. Unscrew the 4 screws and remove the B/Q-Module.



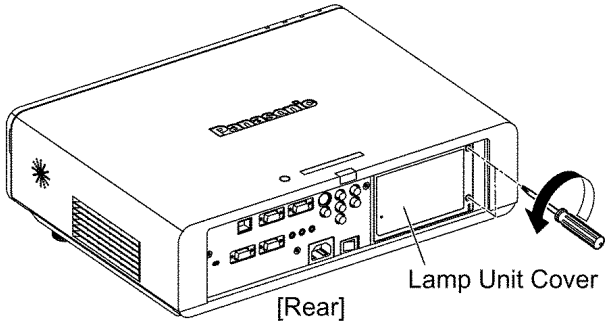
7.15. Removal of P-Module

1. Remove the power unit according to the steps 1 through 11 in the section 7.14. "Removal of B/Q Module".
2. Unscrew the 4 screws and remove the P-Module.

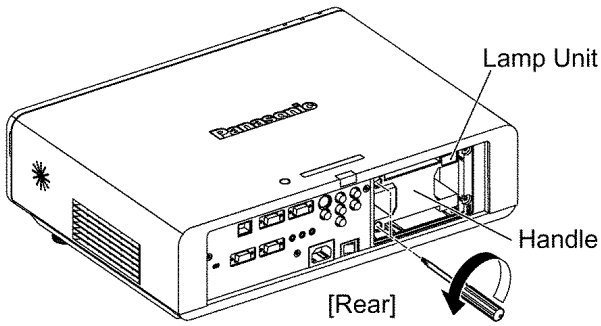


7.16. Removal of Lamp Unit

1. Loosen the 2 screws until they idle, remove the lamp unit cover.



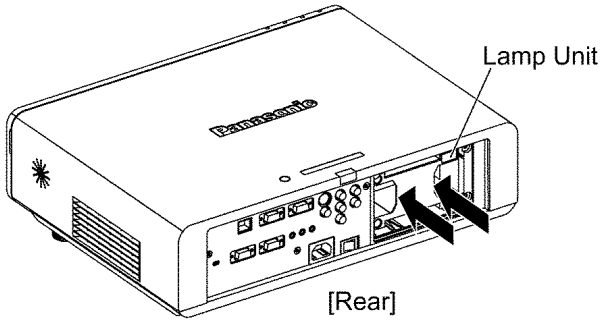
2. Loosen the 2 screws until they idle, remove the lamp unit with the handle.



Note:

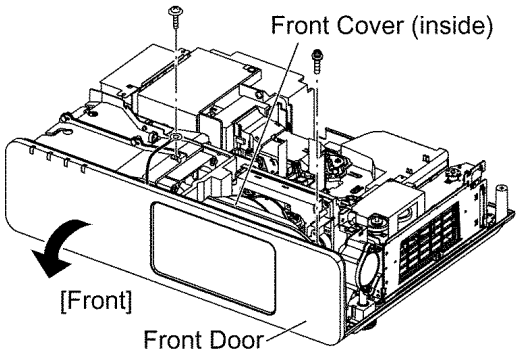
- When installing the lamp unit in the main unit, place it in a specified position and press the right and left sides of the lamp unit (arrow positions shown in the figure below), and confirm the lamp unit is inserted securely.

  Then, tighten the 2 screws fixing the lamp unit, and attach the lamp unit cover.

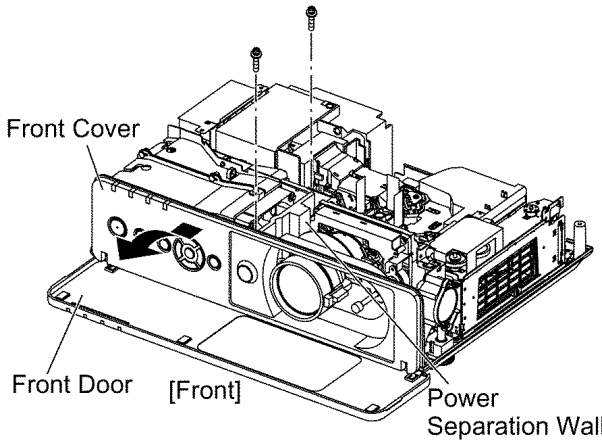


7.17. Removal of Analysis Block and Projection Lens

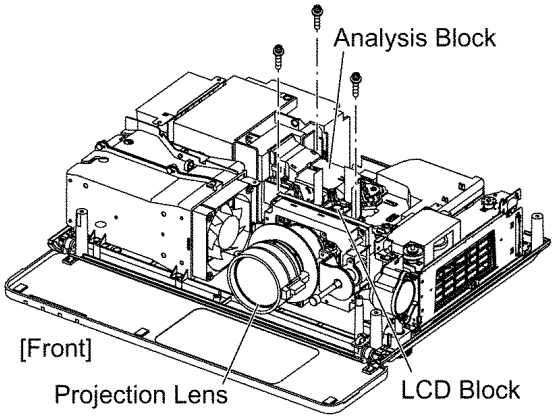
1. Remove the lamp unit according to the section 7.16. "Removal of Lamp Unit".
2. Remove the A-P.C.Board block according to the steps 1 through 4 in the section 7.3. "Removal of A-P.C.Board".
3. Open the front door.
4. Unscrew the 1 screw and remove the front cover (inside).
5. Unscrew the 1 screw and remove the grounding terminal.



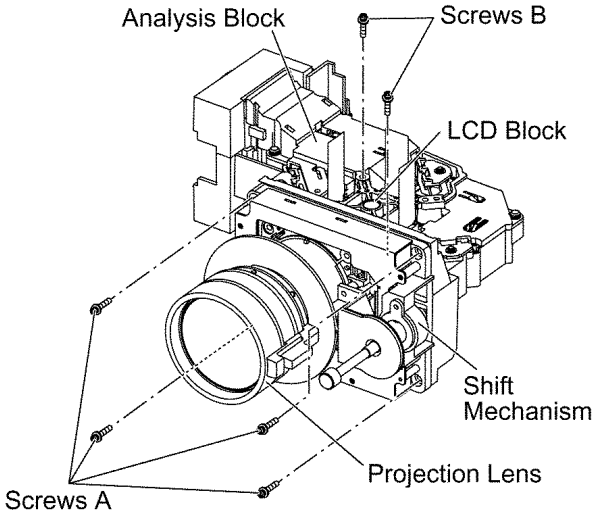
6. Unscrew the 2 screws and remove the power separation wall.
7. Remove the front cover.



8. Unscrew the 3 screws and remove the block of Analysis Block, LCD Block and Projection Lens.



9. Unscrew the 4 screws A and remove the projection lens with the shift mechanism.
10. Unscrew the 2 screws B and remove the LCD block (the analysis block remains).

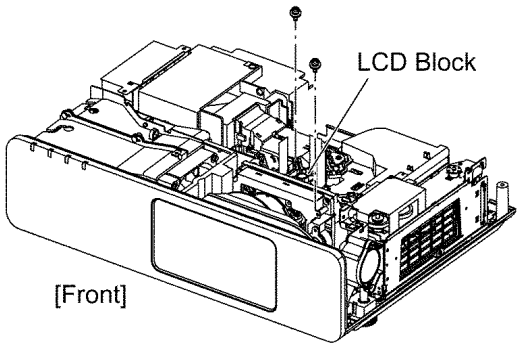


7.18. Removal of LCD Block

1. Remove the A-P.C.Board block according to the steps 1 through 4 in the section 7.3. "Removal of A-P.C.Board".
2. Unscrew the 2 screws and remove the LCD block.

Note:

- Be careful not to touch the surface of prism and LCD panel.



7.19. Replacement of LCD Panel (B)

1. Remove the LCD block according to the section 7.18. "Removal of LCD Block".

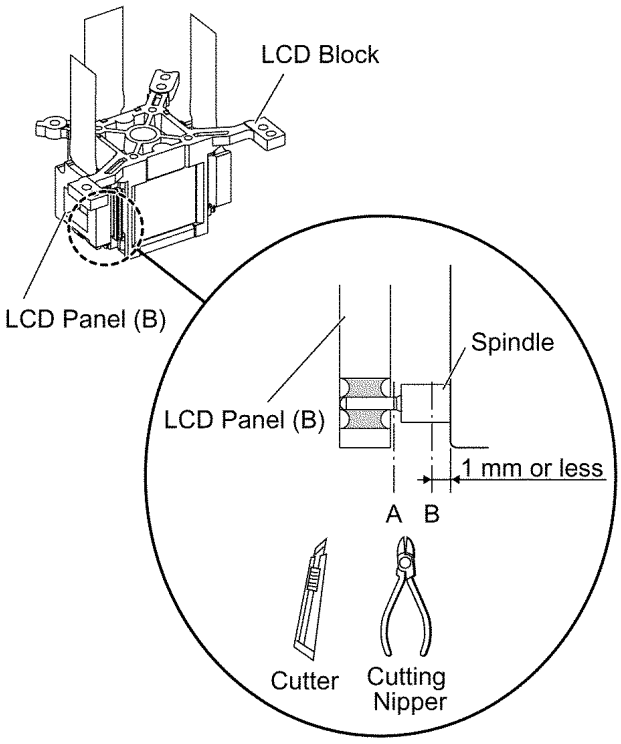
Note:

- Be careful not to touch the surface of prism and LCD panel.

2. Cut the 4 LCD panel installation spindles at the position A and remove the LCD panel.
3. Cut the 4 LCD panel installation spindles at the position B and remove them.

Notes:

- Work carefully not to apply external force around the spindle part by using a cutter, cutting nipper or the like for cutting the spindle.
- Adjust the height after the spindle is cut to 1 mm or less.

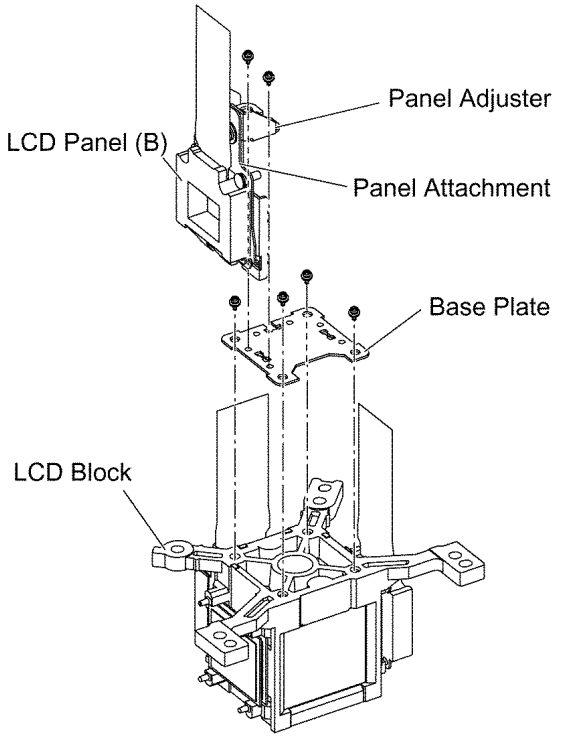


4. Attach the base plate with 4 screws.
5. Tighten the 2 screws temporarily just until new LCD panel (with the panel attachment and panel adjuster) can be

shifted by your fingers.

Note:

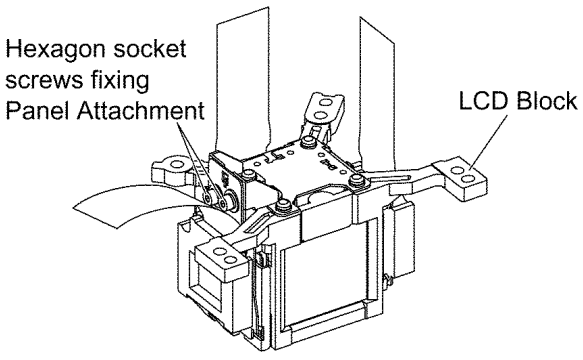
- The panel adjustment fittings set (panel attachment, panel adjuster and base plate) is an option for service.



6. Reassemble the projector in the reverse order of disassembling, but leave the upper case and the screws fixing the A-P.C.Board block as they are removed.
7. Adjust the convergence according to the section 8.4. "Convergence Adjustment".
8. After the adjustment, while paying attention not to vary the adjusting result, tighten the 2 screws fixing the panel attachment with a hexagon head wrench.

Notes:

- Prepare a hexagon head wrench processed short.

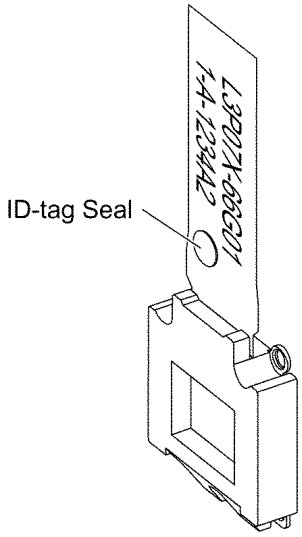


9. Reassemble the projector as it was.

7.20. LCD Panel Discrimination

ID-tag seal color	LCD panel
Red	LCD panel (R)
Blue	LCD panel (B)
(No seal)	LCD panel (G)

- Since the ID-tag seal is pasted to the FPC of LCD Panel, (R), (G) or (B) can be easily identified by the color of the seal.
- Finally, identify the panel color by the part number printed on the FPC.



7.21. LCD Panel Combination

- Part number is printed on the FPC of LCD Panel.
- When replacing LCD Panel, use a component which has the same part number as the original.

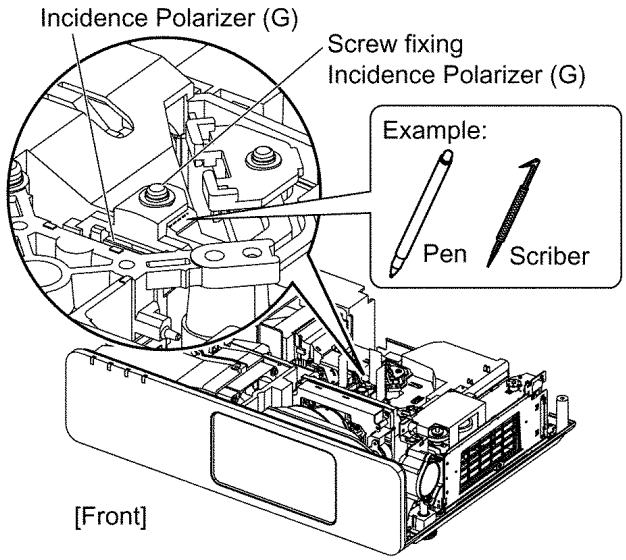
LCD panel	Combination1	Combination2
R	L5BDAYY00068 (L3P07X-65G01)	L5BDAYY00071 (L3P07X-66G01)
G	L5BDAYY00072 (L3P07X-66G01)	L5BDAYY00069 (L3P07X-65G01)
B	L5BDAYY00070 (L3P07X-65G01)	L5BDAYY00073 (L3P07X-66G01)

7.22. Replacement of Incidence Polarizer (G)

1. Remove the A-P.C.Board block according to the steps 1 through 4 in the section 7.3. "Removal of A-P.C.Board".
2. Mark positions of the incidence polarizer (G).

   Note:

   - Mark accurately as possible because the marks will be used for resetting the incidence polarizer position.
3. Unscrew the 1 screw and remove the incidence polarizer (G).
4. Attach a new incidence polarizer (G) and align it with the mark.
5. Tighten the 1 screw with care not to move the incidence polarizer position.

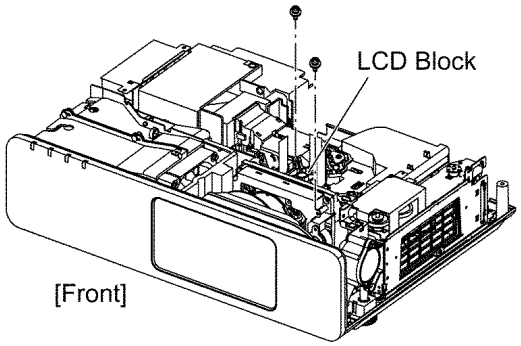


7.23. Replacement of Incidence Polarizer (R and B)

1. Remove the A-P.C.Board block according to the steps 1 through 4 in the section 7.3. "Removal of A-P.C.Board".
2. Unscrew the 2 screws and remove the LCD block.

Note:

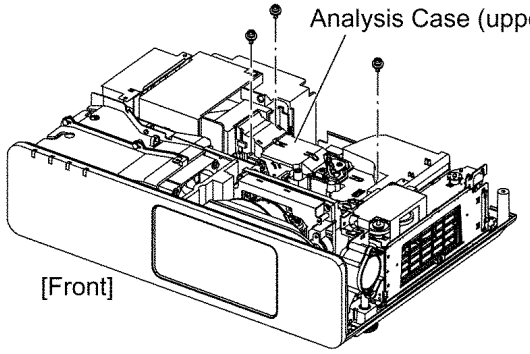
- Be careful not to touch the surface of prism and LCD panel.



3. Unscrew the 3 screws and remove the analysis case (upper) .

Note:

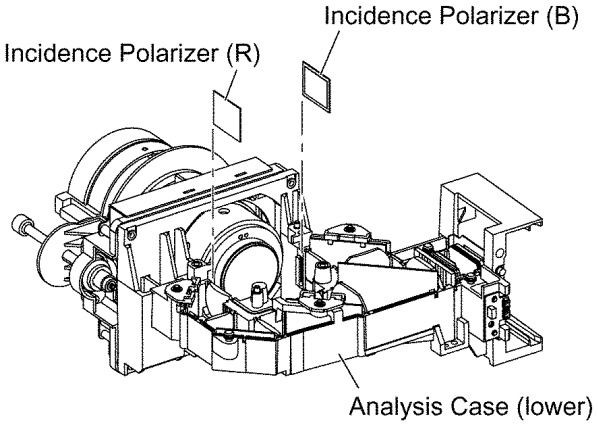
- The incidence polarizer (G) is installed in the analysis case (upper). Handle with care not to apply external force to the incidence polarizer (G).



4. Replace the incidence polarizer.

Note:

- Be careful not to touch the surface of incidence polarizer.



7.24. Replacement of Projection Polarizer

- The procedure is described as an example of projection polarizer (B).

1. Remove the LCD block according to the section 7.18. "Removal of LCD Block".
2. Remove the projection polarizer which requires replacing. (The projection polarizer is secured with adhesive tape.)

Notes:

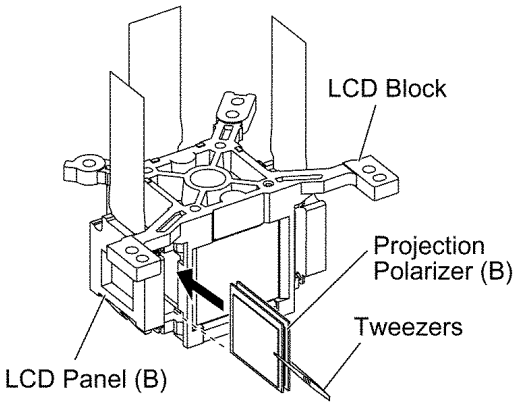
- Be careful not to damage peripheral components (prism, LCD panel, etc.).
- Use tweezers.

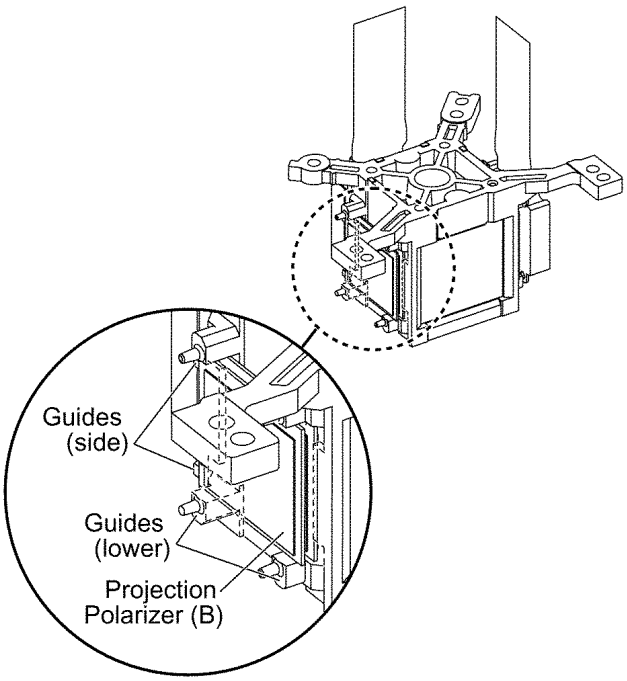
3. Install new projection polarizer.
   a. Put adhesive tape on the projection polarizer.
   b. Stick the projection polarizer on the specified position.

Notes:

- Align the projection polarizer with the guides (lower, side) of LCD block.
- Be careful not to touch the surface of projection polarizer.
- Use tweezers.

   c. Press the adhesive part and secure the projection polarizer.



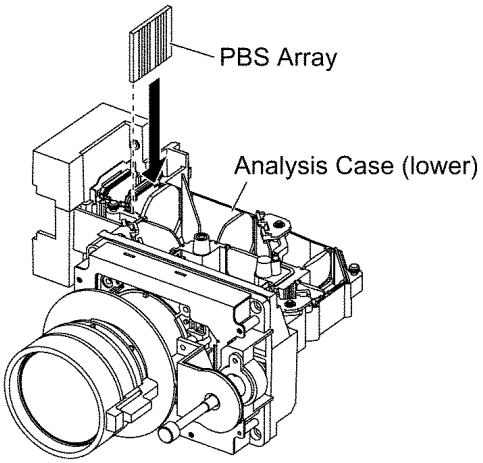


7.25. Replacement of PBS Array (Analysis Block)

1. Remove the analysis case (upper) according to the steps 1 through 3 in the section 7.23. "Replacement of Incidence Polarizer (R and B)".
2. Remove the PBS array.
3. Install new PBS array.

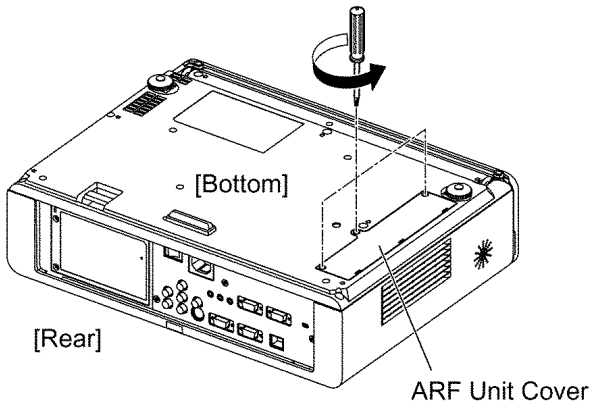
Note:

- Be careful not to mistake the direction (inside and outside, upper and lower).
- Be careful not to touch the surface of PBS array.

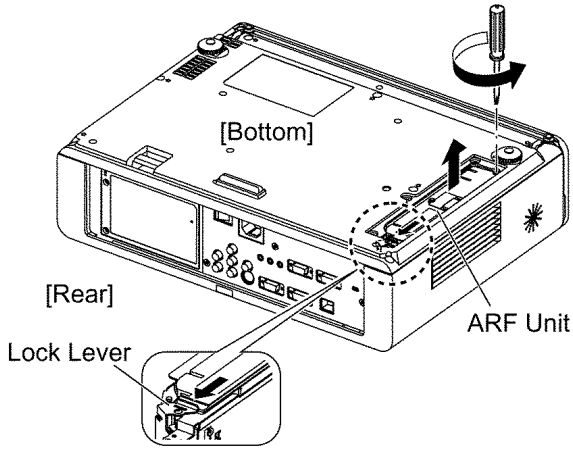


7.26. Removal of ARF (Auto Rolling Filter) Unit

1. Turn the projector upside down.
2. Loosen the 3 screws until they idle, remove the ARF unit cover.

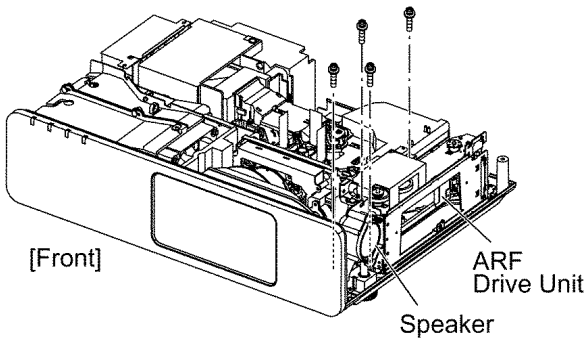


3. Loosen the 1 screw until it idles, remove the ARF unit while sliding the lock lever.



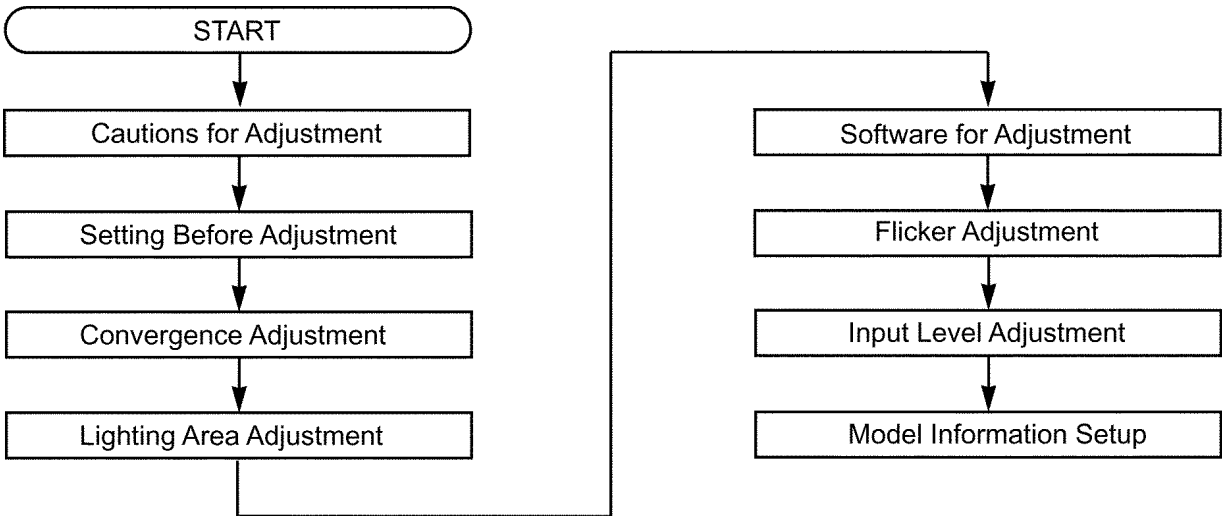
7.27. Removal of ARF Drive Unit

1. Remove the ARF unit according to the section 7.26. "Removal of ARF (Auto Rolling Filter) Unit".
2. Remove the A-P.C.Board block according to the steps 1 through 4 in the section 7.3. "Removal of A-P.C.Board".
3. Unscrew the 2 screws and remove the speaker block.
4. Unscrew the 1 screw and remove the ARF drive unit.



8 Measurement and Adjustments

8.1. Adjustment Procedure Flowchart

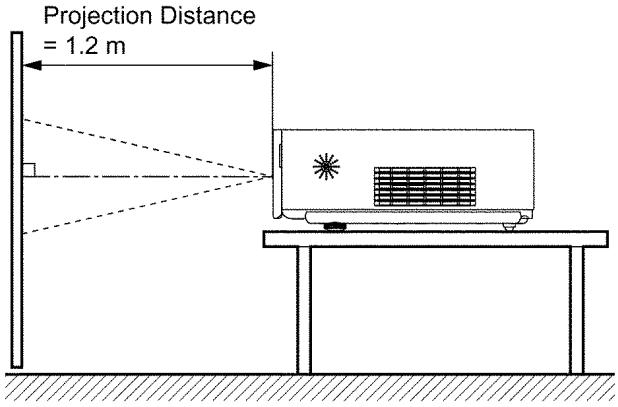


8.2. Cautions for Adjustment

- Never unplug the power cord until the power indicator on the projector illuminates red.
- To maintain and ensure safety, always use the designated components for replacement parts.
- If removing any clamps, lead wires or connectors, always place them back in their proper locations.
- Be careful not to damage the lead wires or components when using a soldering iron or similar tool.

8.3. Setting Before Adjustment

- Set up the projector to obtain the projection distance below.
- Turn the zoom ring of the projector to obtain the largest size of the picture.



8.4. Convergence Adjustment

Execute this adjustment when replacing the LCD panel (B) .

8.4.1. Tools to be used

Service Kit : This kit is composed of 3 extension flexible cables.

Note:

- Consult your dealer or Authorized Service Center for the service kit.

8.4.2. Preparation

1. Loosen 2 screws fixing the panel adjuster and 2 screws fixing the panel attachment, then tighten the 4 screws temporarily just until the LCD panel can be shifted by your fingers.

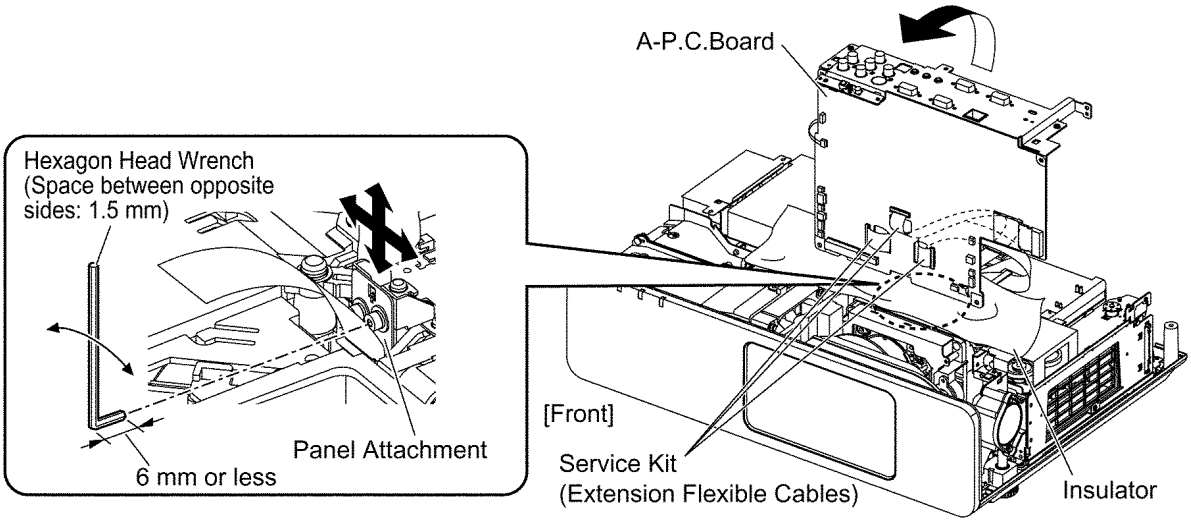
Note:

・See figures in the section 7.19. "Replacement of LCD Panel (B)" for 2 screws fixing the panel adjuster and 2 screws fixing the panel attachment.

2. Reassemble the projector in the reverse order of disassembling, but leave the upper case and the screws fixing the A-P.C.Board block as they are removed.
3. Disconnect the connector between L-P.C.Board and A-P.C.Board (A26).
4. Connect the service kit (extension flexible cables).
   ・Each flexible cable of LCD Panels (R/G/B) - Connectors (A1/A2/A3) on A-P.C.Board
5. Covering with an insulator (cloth or the like) to prevent a short circuit, set the A-P.C.Board block on the main unit.

Note:

・Handle with care not to apply external force to connecting parts which connect the main unit and A-P.C.Board.

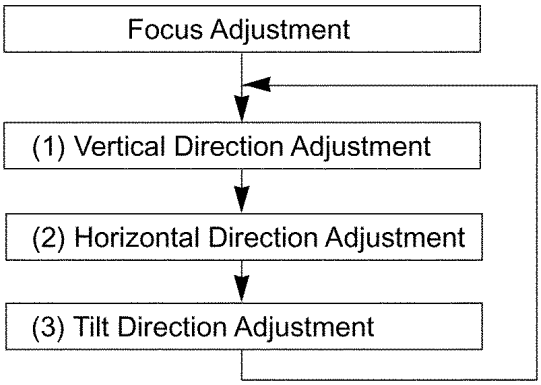


8.4.3. Adjustment Procedure

Prepare 2 pieces of thick black paper (23 mm × 100 mm) that can be shaded.

・Cover and shade LCD panels (R) and (G) with the paper.

1. Display the green crosshatch pattern and adjust the lens focus.
2. Display green and blue crosshatch patterns.
3. Adjust focus by shifting the panel adjuster for LCD panel (B) back and forth, then tighten the 2 screws.
4. Adjust the LCD panel (B) position so that the vertical center of blue crosshatch pattern is overlapped with the vertical center of green crosshatch pattern.
5. Adjust the LCD panel (B) position so that the horizontal center of blue crosshatch pattern is overlapped with the horizontal center of green crosshatch pattern.
6. Correct the tilt of the blue crosshatch pattern by adjusting the LCD panel (B) position.
7. Display green, red and blue crosshatch patterns and confirm the convergence. If it is necessary, fine adjust the convergence so that the blue crosshatch pattern is overlapped with green one.



Repeat steps (1) to (3) until the green and blue crosshatch patterns merge into a cyan pattern.

8. After the adjustment, reassemble the projector according to the steps 8 through 9 in the section 7.19. "Replacement of LCD Panel (B)".

8.5. Lighting Area Adjustment

8.5.1. Tools to be used

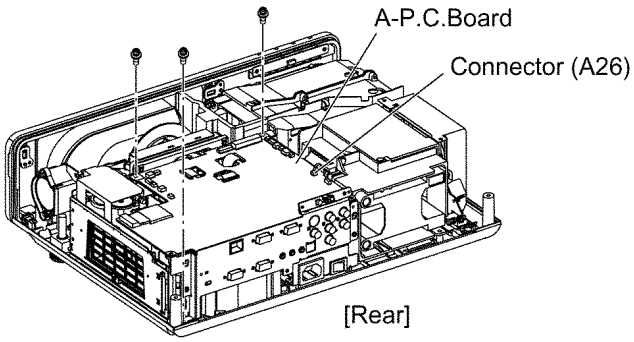
Service Kit: This kit is composed of 3 extension flexible cables.

Note:

・Consult your dealer or Authorized Service Center for the service kit.

8.5.2. Preparation

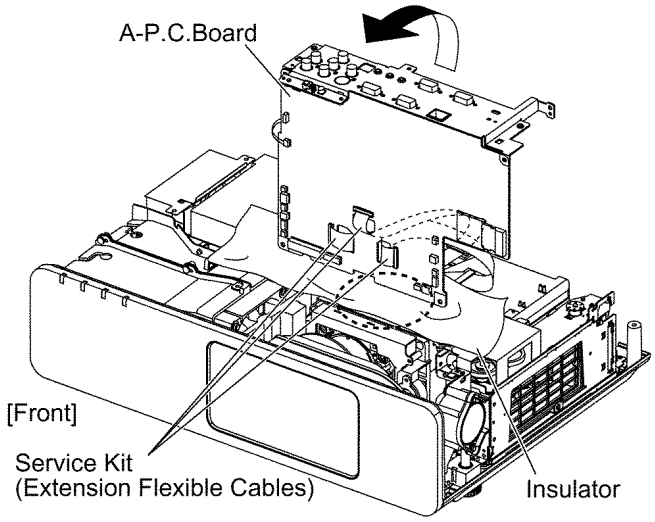
1. Remove the upper case and the connector cover according to the steps 1 and 2 in the section 7.3. "Removal of A-P.C.Board".
2. Unscrew the 3 screws.
3. Disconnect the connector between L-P.C.Board and A-P.C.Board (A26).



4. Connect the service kit (extension flexible cables).
   ・Each flexible cable of LCD Panels (R/G/B) - Connectors (A1/A2/A3) on A-P.C.Board
5. Covering with an insulator (cloth or the like) to prevent a short circuit, set the A-P.C.Board block on the main unit.

   Note:

   ・Handle with care not to apply external force to connecting parts which connect the main unit and A-P.C.Board.



8.5.3. Adjustment Procedure

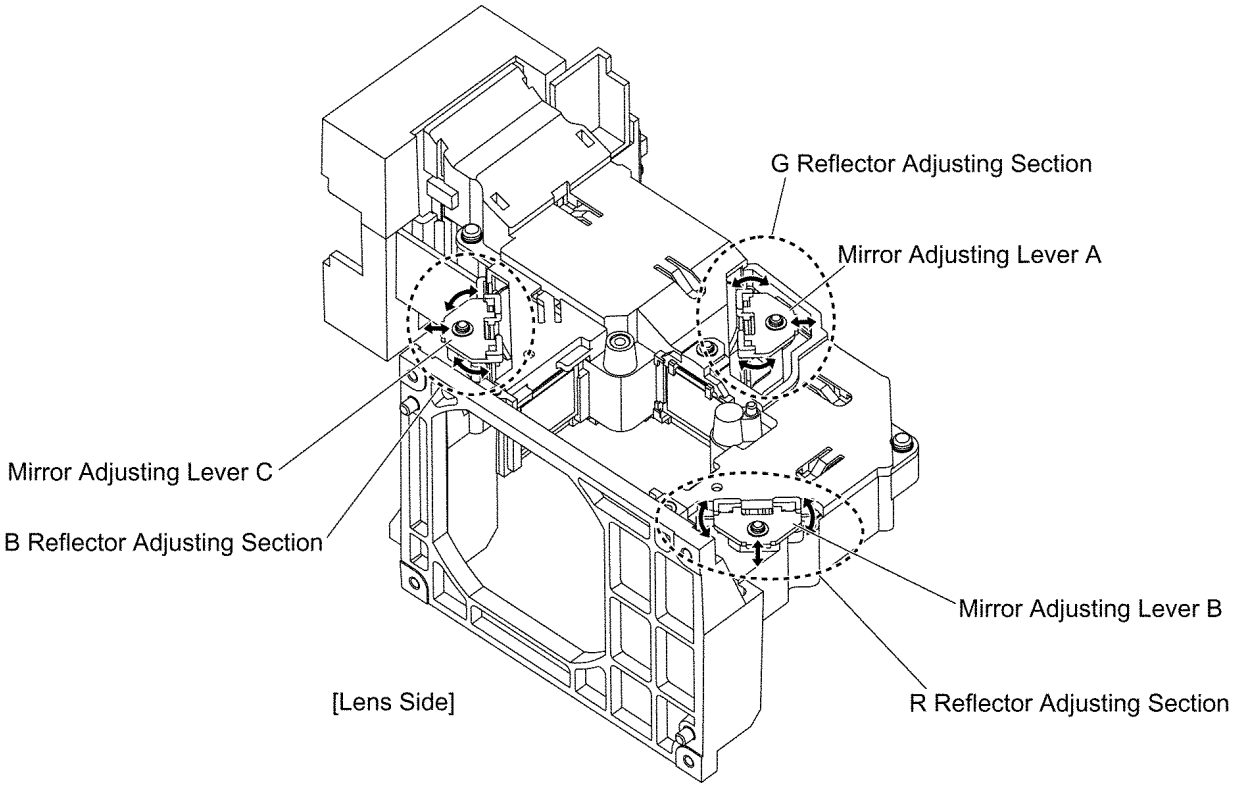
8.5.3.1. Outline

When the lighting area is off from the adjustment and color unevenness appears, adjust the lighting area into correct position.

Symptom	Measure
Magenta unevenness	G Reflector Adjustment
Cyan unevenness	R Reflector Adjustment
Yellow unevenness	B Reflector Adjustment

・Shifting the mirror adjusting lever horizontally, adjust color unevenness on the screen upper/lower sides.

・Twisting the mirror adjusting lever, adjust color unevenness on the screen right/left sides.



[Above figure is shown only the analysis block for explanation.]

8.5.3.2. G Reflector Adjustment

1. Turn on the power and display 100 % white pattern on the screen.
2. Loosen the 1 screw fixing the mirror adjusting lever A just until the lever can be shifted.

3. Adjust the mirror adjusting lever A position to minimize color unevenness on the screen by shifting the lever in arrow directions.
4. Tighten the 1 screw.

8.5.3.3. R Reflector Adjustment

1. Turn on the power and display 100 % white pattern on the screen.
2. Loosen the 1 screw fixing the mirror adjusting lever B just until the lever can be shifted.
3. Adjust the mirror adjusting lever B position to minimize color unevenness on the screen by shifting the lever in arrow directions.
4. Tighten the 1 screw.

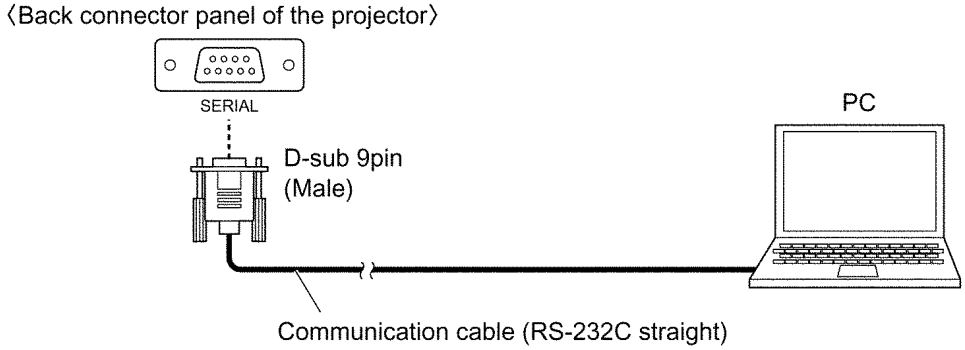
8.5.3.4. B Reflector Adjustment

1. Turn on the power and display 100 % white pattern on the screen.
2. Loosen the 1 screw fixing the mirror adjusting lever C just until the lever can be shifted.
3. Adjust the mirror adjusting lever C position to minimize color unevenness on the screen by shifting the lever in arrow directions.
4. Tighten the 1 screw.

8.6. Software for Adjustment

8.6.1. Outline

- This projector needs computer-aided adjustments.
- After the software adjustments, this projector must be turned off and on again to memorize the settings.
- Connect the cable between the projector and a PC as shown below.
- Updating the software will change the version number.



8.6.2. Operating Procedure

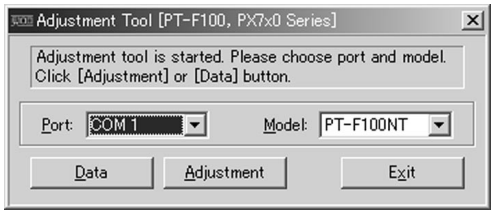
1. Run software program by the keyboard entry.

   Note:

   - Use the software program as below.

     Adjustment Tool [PT-F100, PX7x0 Series]
2. The first menu is Port and Model selection menu.
3. Adjust the projector by selecting the necessary item from the menu in each stage.

8.6.3. Port and Model Selection Menu



Select the applying item with the list box and click "Data" or "Adjustment".

8.6.3.1. Explanation of Buttons

Port:

Port name of PC which connects with the projector

Model:

Model name of projectors

Data:

Displays the data transmission/reception menu.

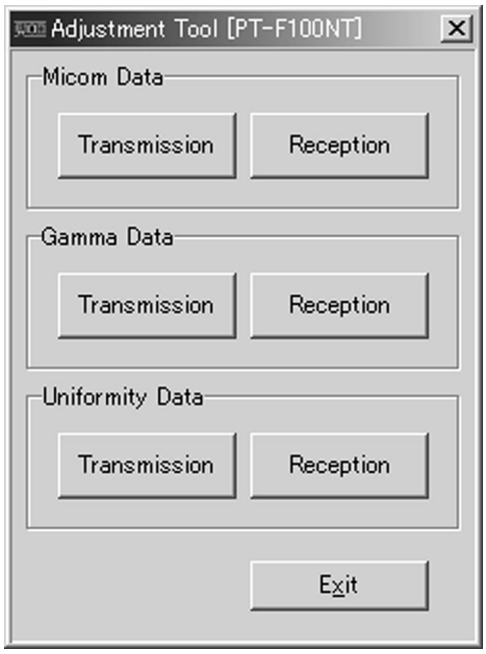
Adjustment:

Displays the adjustment menu.

Exit:

Exits this application.

8.6.4. Data Transmission/Reception Menu



8.6.4.1. Explanation of Buttons

Micom Data Transmission:

Reads the microcomputer data from the file and transmits it to the projector.

Micom Data Reception:

Receives the microcomputer data from the projector and writes it in the file.

Gamma Data Transmission:

Reads the gamma data from the file and transmits it to the projector.

Gamma Data Reception:

Receives the gamma data from the projector and writes it in the file.

Uniformity Data Transmission:

Reads the color unevenness correction data from the file and transmits it to the projector.

Uniformity Data Reception:

Receives the color unevenness correction data from the projector and writes it in the file.

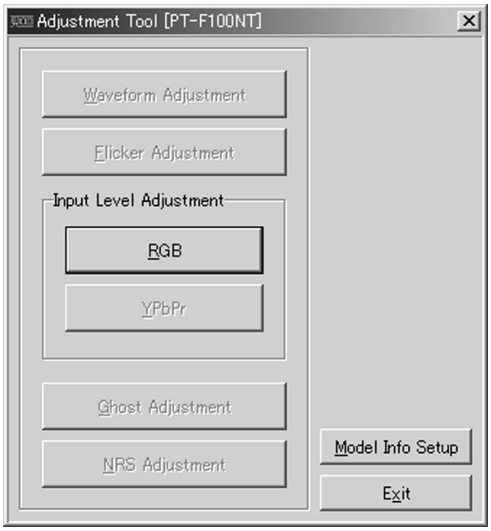
Exit:

Exits this application.

8.6.4.2. Receiving and transmitting of the data

Click a target button and specify a file name.

8.6.5. Adjustment Menu



8.6.5.1. Explanation of Buttons

Input Level Adjustment RGB:

Displays the RGB input level adjustment menu.

Model Info Setup

Displays the model information setup menu.

Exit:

Exits this application.

8.7. Flicker Adjustment

According to the procedure of chapter 5 "Flicker Adjustment Mode", minimize the flicker.

8.8. Input Level Adjustment

8.8.1. Adjustment Menu

8.8.2. Explanation of Buttons

OK:

Executes automatic sub contrast and sub brightness adjustments, then closes this dialog.

Cancel:

Cancels this menu.

8.8.3. Equipment to be used

PC, RGB Signal Generator, Software for Adjustment

8.8.4. Adjustment Procedure

1. Display Input Level Adjustment(RGB) menu.
2. Input a window pattern signal to COMPUTER 1 IN connector.

Note:

- Use approx. 15 % window pattern as follows.

  Black background (screen width) : White window width = 2 : 1

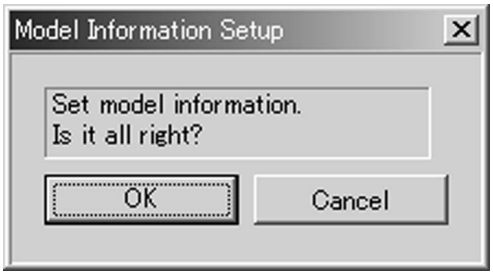
  Black background (screen height) : White window height = 3 : 1

・Use the window pattern of XGA (1 024 × 768).

3. Click the OK button.

8.9. Model Information Setup

8.9.1. Adjustment Menu



8.9.2. Explanation of Buttons

OK:

Executes model information setup, then closes this dialog.

Cancel:

Cancels this menu.

8.9.3. Equipment to be used

PC, Software for Adjustment

8.9.4. Setup Procedure

Set the projector into standby mode (POWER button on the projector control panel illuminated red), and execute the following procedure.

1. Display Model Information Setup menu.
2. Click the OK button.

9 Troubleshooting

The letters in the left of the inspection items indicate the P.C.Boards or Modules related to their respective descriptions.

Note: A

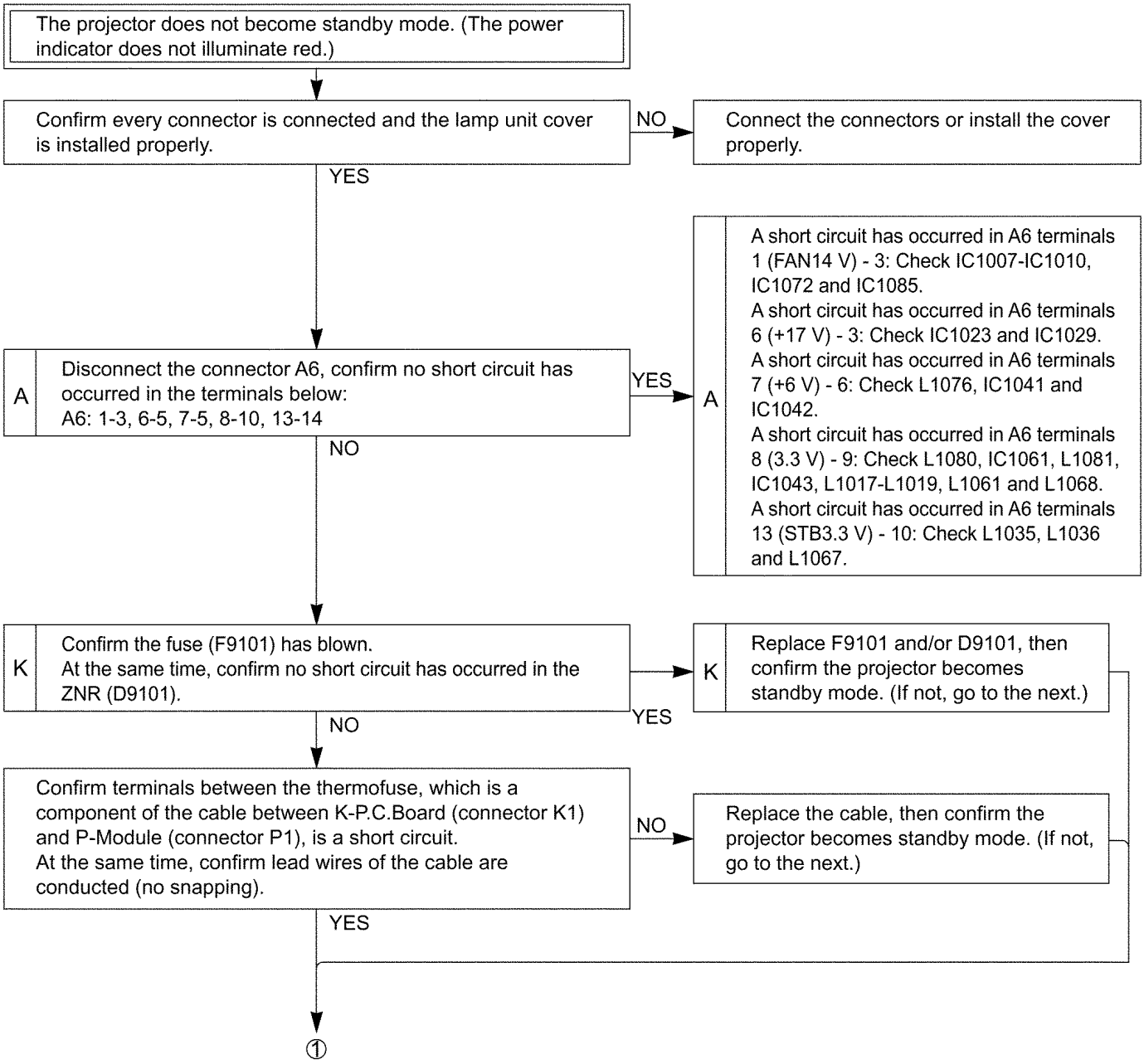
The letter of the alphabet indicates the P.C.Board or Module name.
(Example) A: A-P.C.Board, B: B-Module

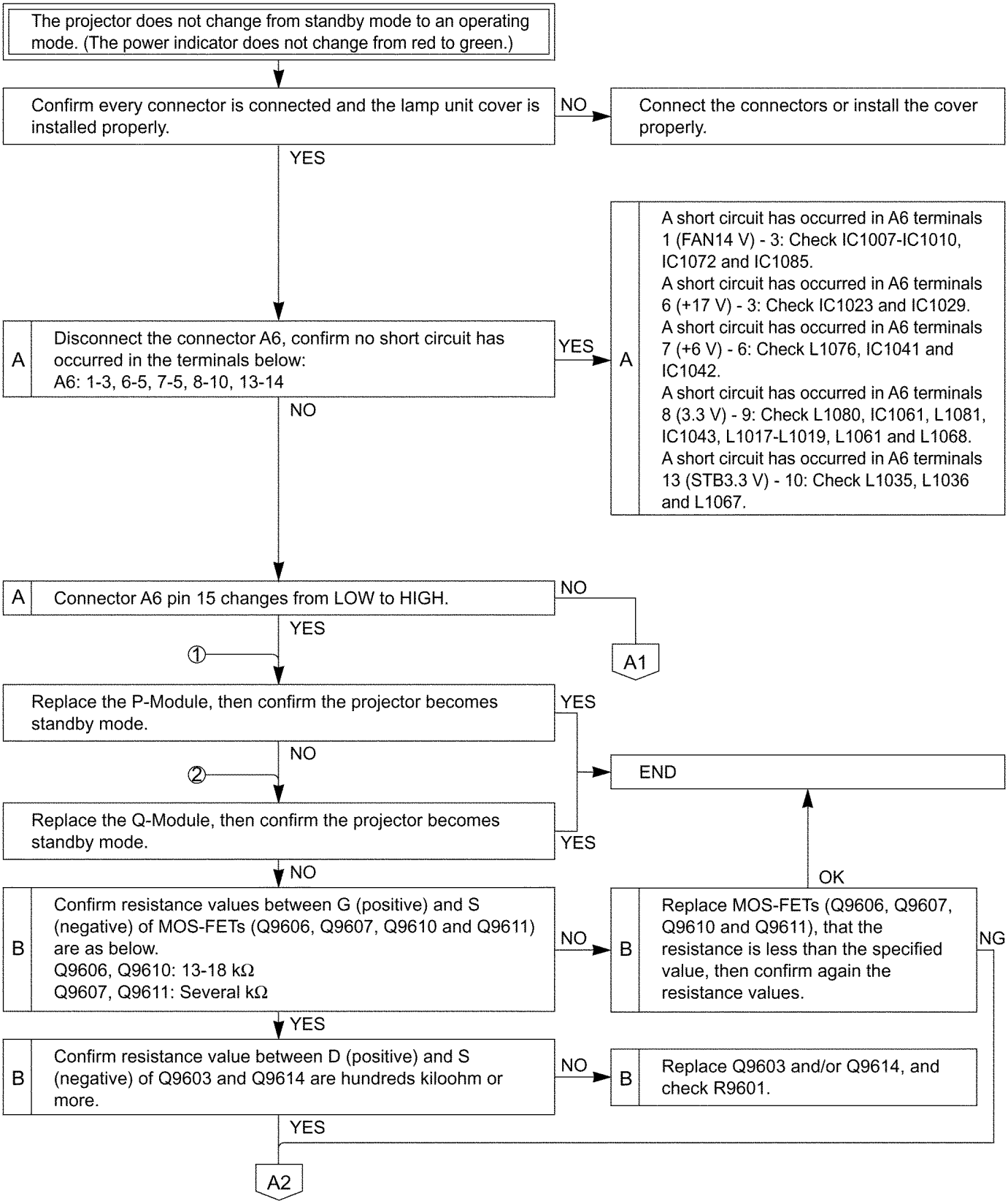
If replacing A-P.C.Board (assembly), read the ROM data from the old P.C.Board and write it in the new one according to the section 8.6. "Software for Adjustment". At this time, if the readout from the old P.C.Board does not succeed, remove IC1011 and IC1017 from the old P.C.Board and install them on the new one. Then, execute the self-check according to the chapter 3. "Self-Check Mode", and confirm "G SAVED" and "U-SAVED" display "OK".

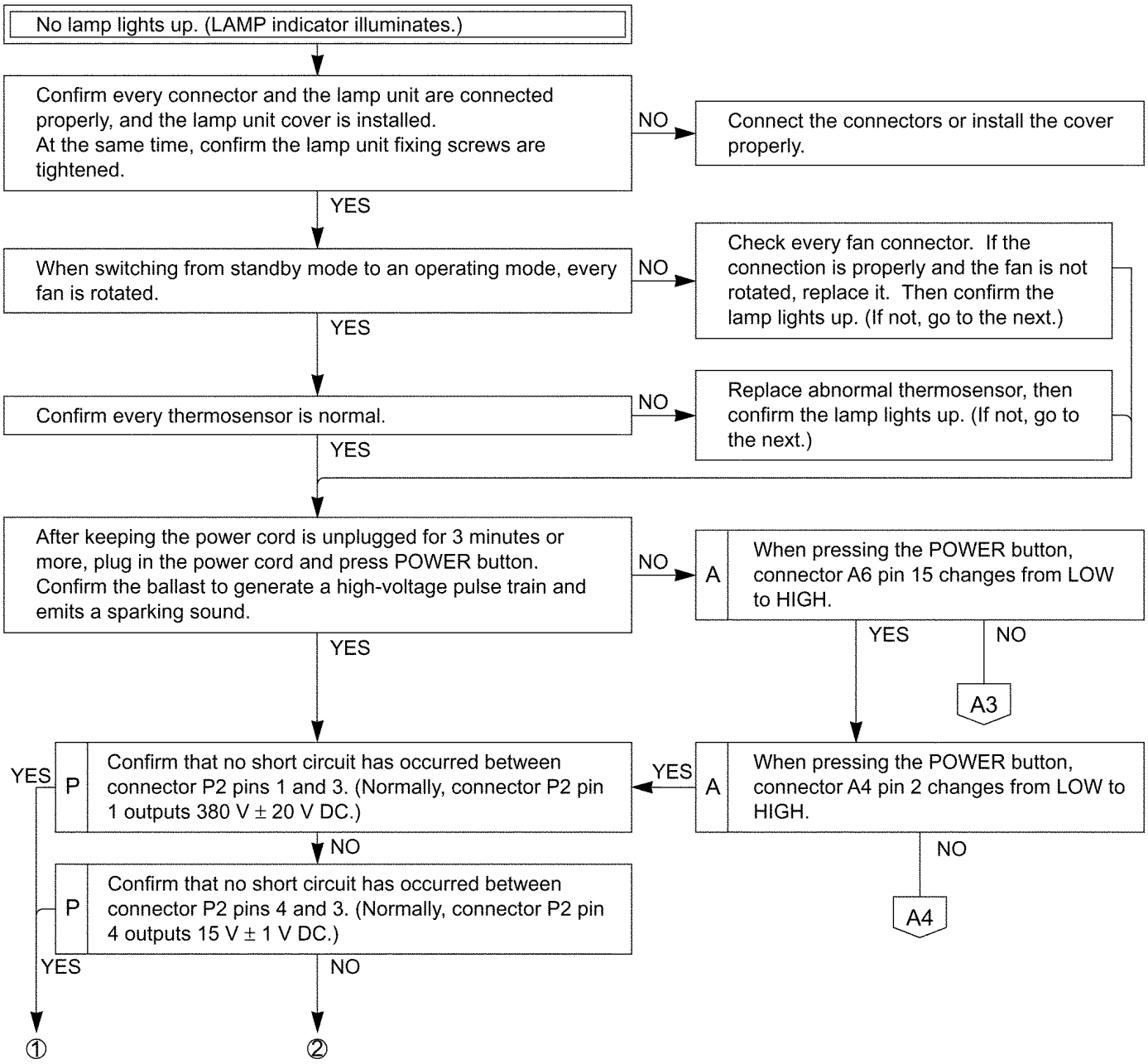
If replacing A-P.C.Board (assembly), minimize the flicker according to the chapter 5. "Flicker Adjustment Mode".

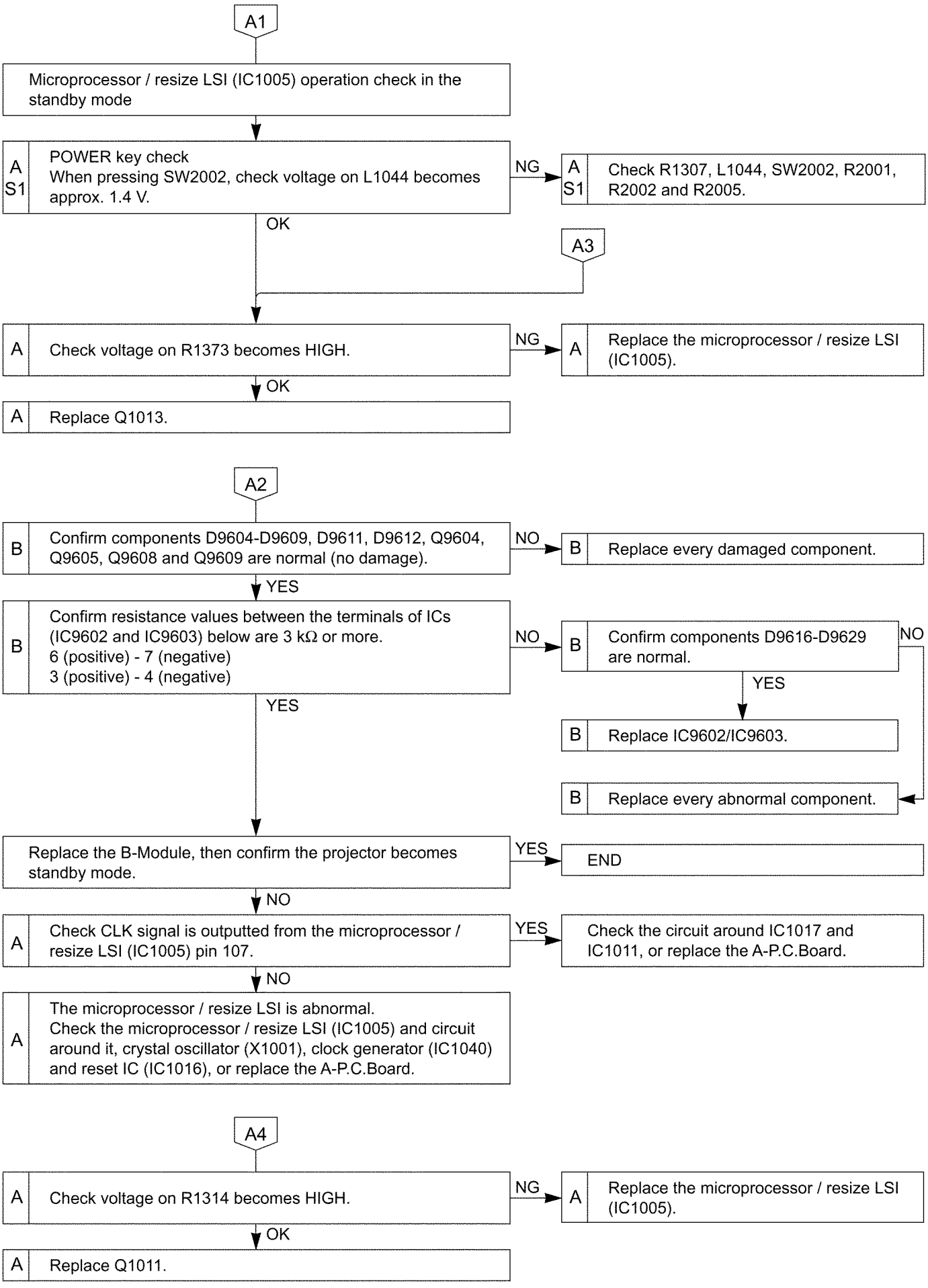
If replacing A-P.C.Board (assembly), adjust the RGB Input Level according to the chapter 8.8. "Input Level Adjustment".

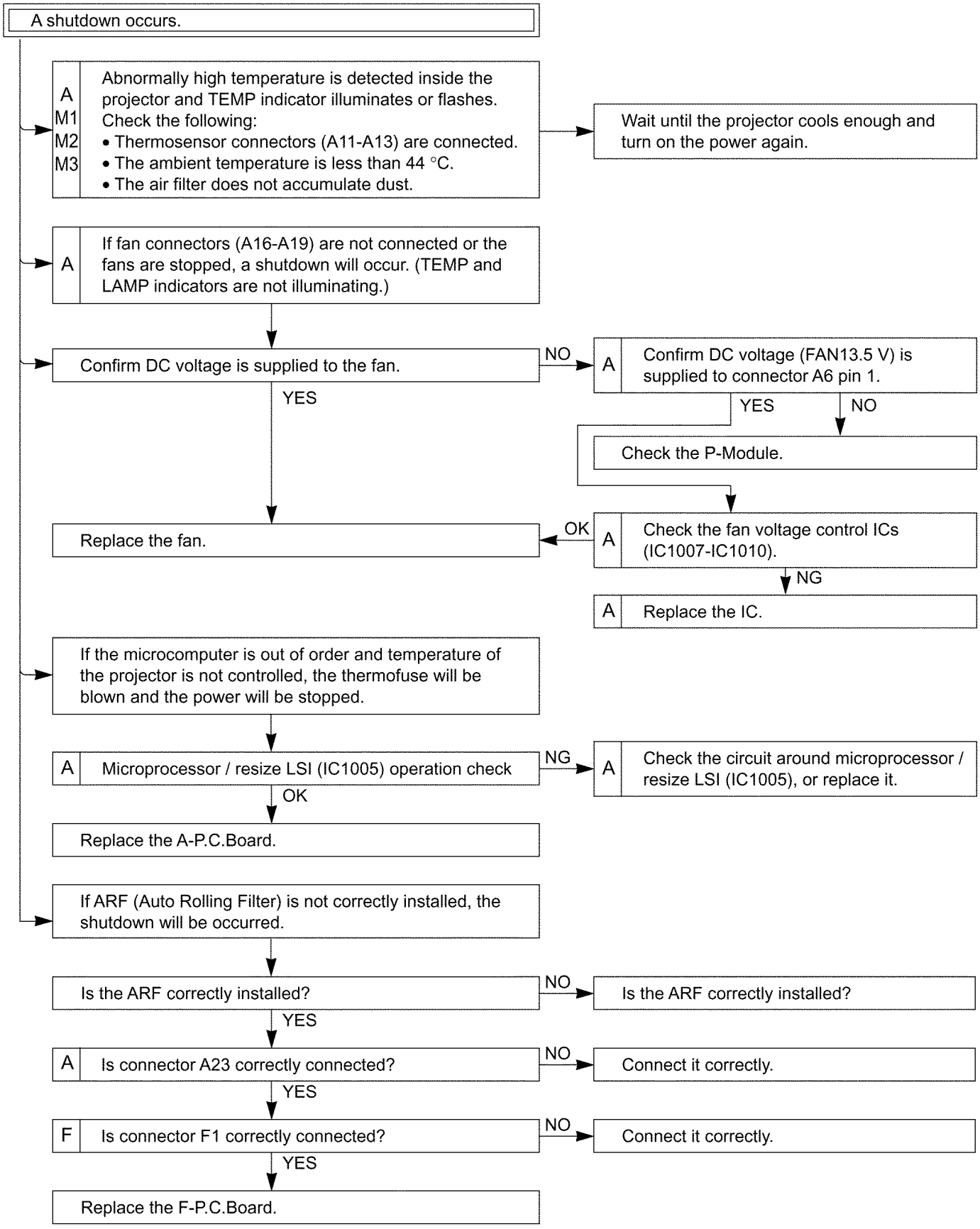
If replacing A-P.C.Board (assembly), set Model Information according to the chapter 8.9. "Model Information Setup".

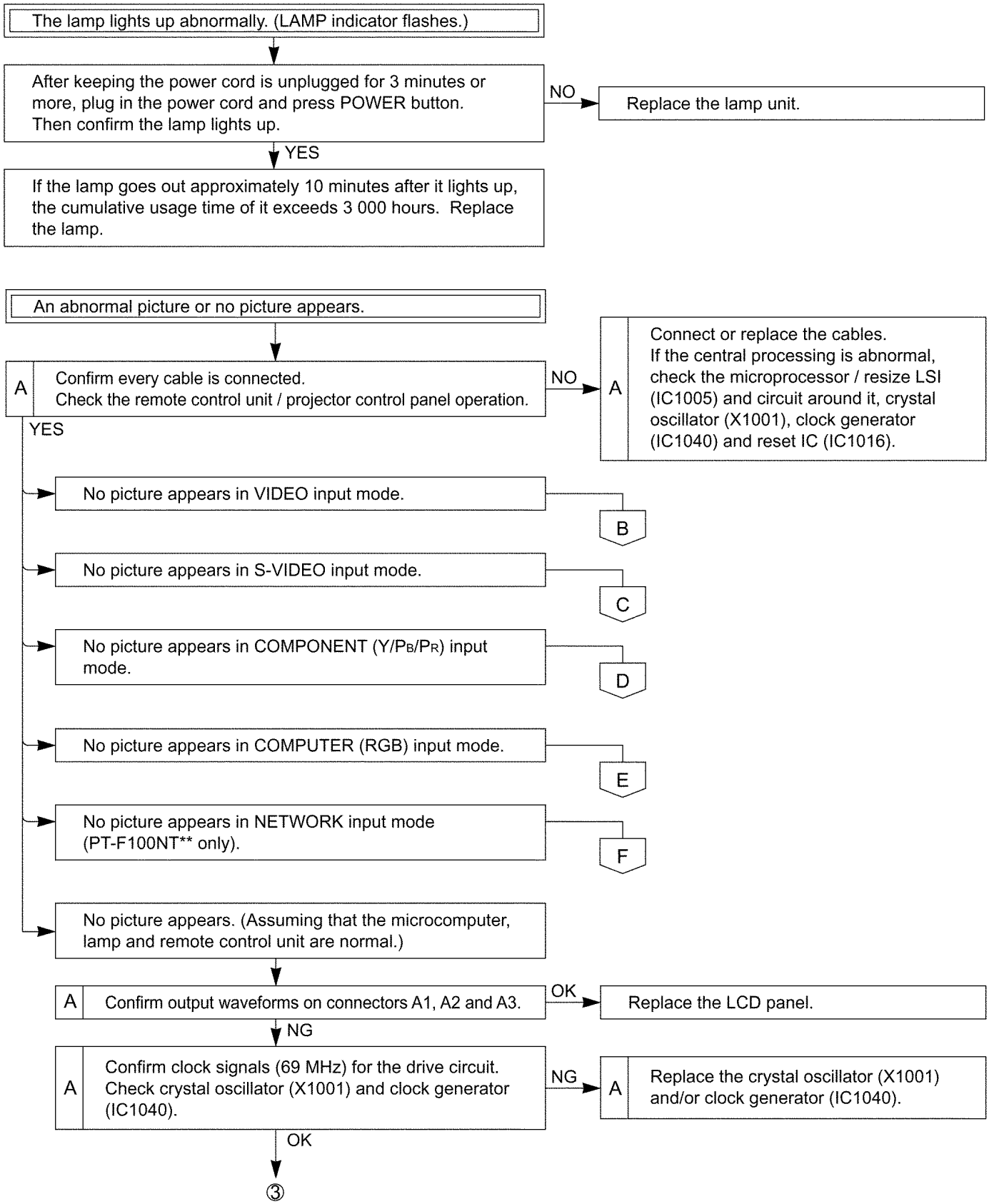


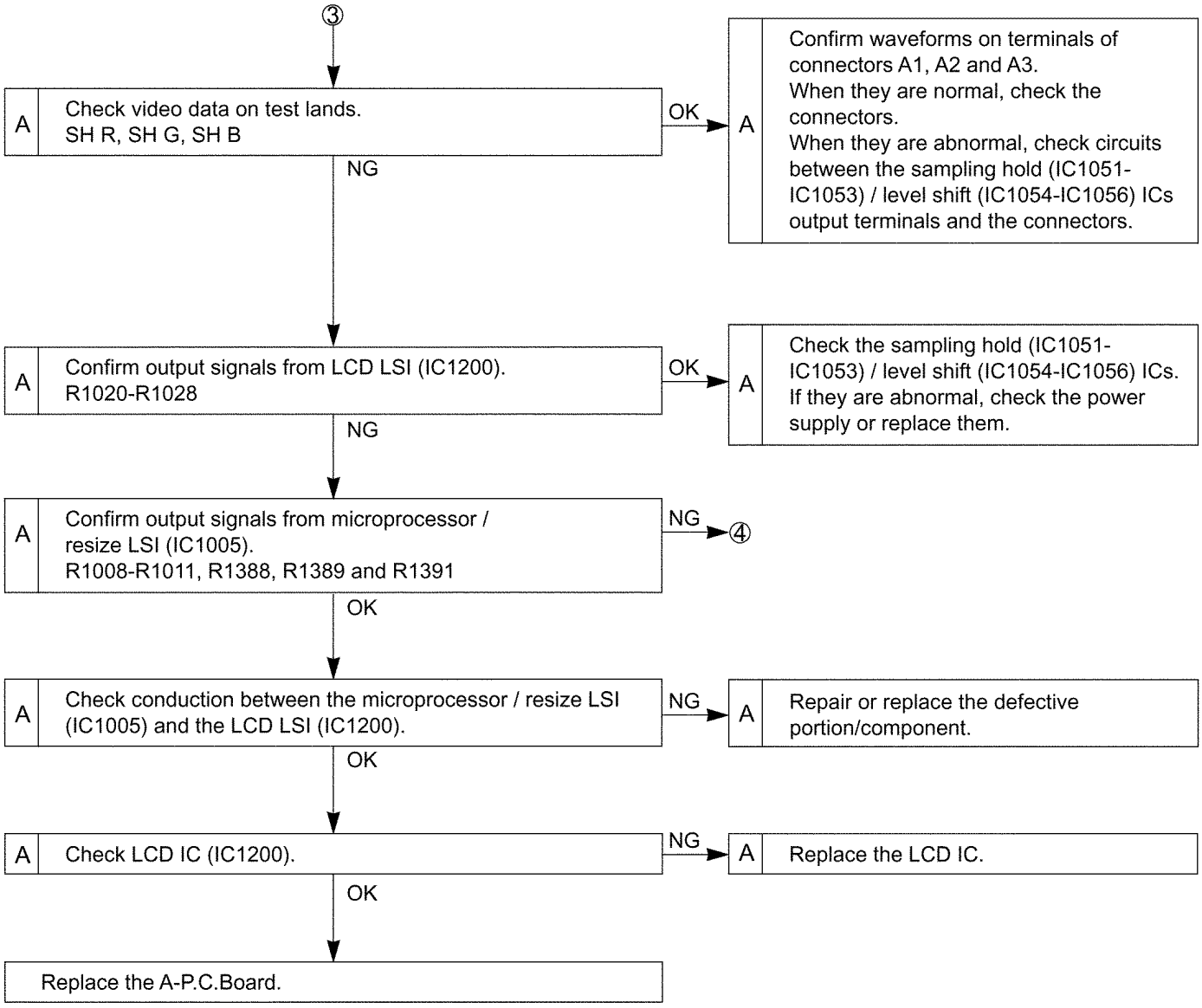

The projector does not change from standby mode to an operating mode. (The power indicator does not change from red to green.)
Confirm every connector is connected and the lamp unit cover is installed properly.
NO
Connect the connectors or install the cover properly.
YES
A
Disconnect the connector A6, confirm no short circuit has occurred in the terminals below:
A6: 1-3, 6-5, 7-5, 8-10, 13-14
YES
A
A short circuit has occurred in A6 terminals 1 (FAN14 V) - 3: Check IC1007-IC1010, IC1072 and IC1085.
A short circuit has occurred in A6 terminals 6 (+17 V) - 3: Check IC1023 and IC1029.
A short circuit has occurred in A6 terminals 7 (+6 V) - 6: Check L1076, IC1041 and IC1042.
A short circuit has occurred in A6 terminals 8 (3.3 V) - 9: Check L1080, IC1061, L1081, IC1043, L1017-L1019, L1061 and L1068.
A short circuit has occurred in A6 terminals 13 (STB3.3 V) - 10: Check L1035, L1036 and L1067.
NO
A
Connector A6 pin 15 changes from LOW to HIGH.
NO
A1
YES
①
Replace the P-Module, then confirm the projector becomes standby mode.
YES
END
NO
②
Replace the Q-Module, then confirm the projector becomes standby mode.
YES
NO
OK
B
Confirm resistance values between G (positive) and S (negative) of MOS-FETs (Q9606, Q9607, Q9610 and Q9611) are as below.
Q9606, Q9610: 13-18 kΩ
Q9607, Q9611: Several kΩ
NO
B
Replace MOS-FETs (Q9606, Q9607, Q9610 and Q9611), that the resistance is less than the specified value, then confirm again the resistance values.
NG
YES
B
Confirm resistance value between D (positive) and S (negative) of Q9603 and Q9614 are hundreds kiloohm or more.
NO
B
Replace Q9603 and/or Q9614, and check R9601.
YES
A2

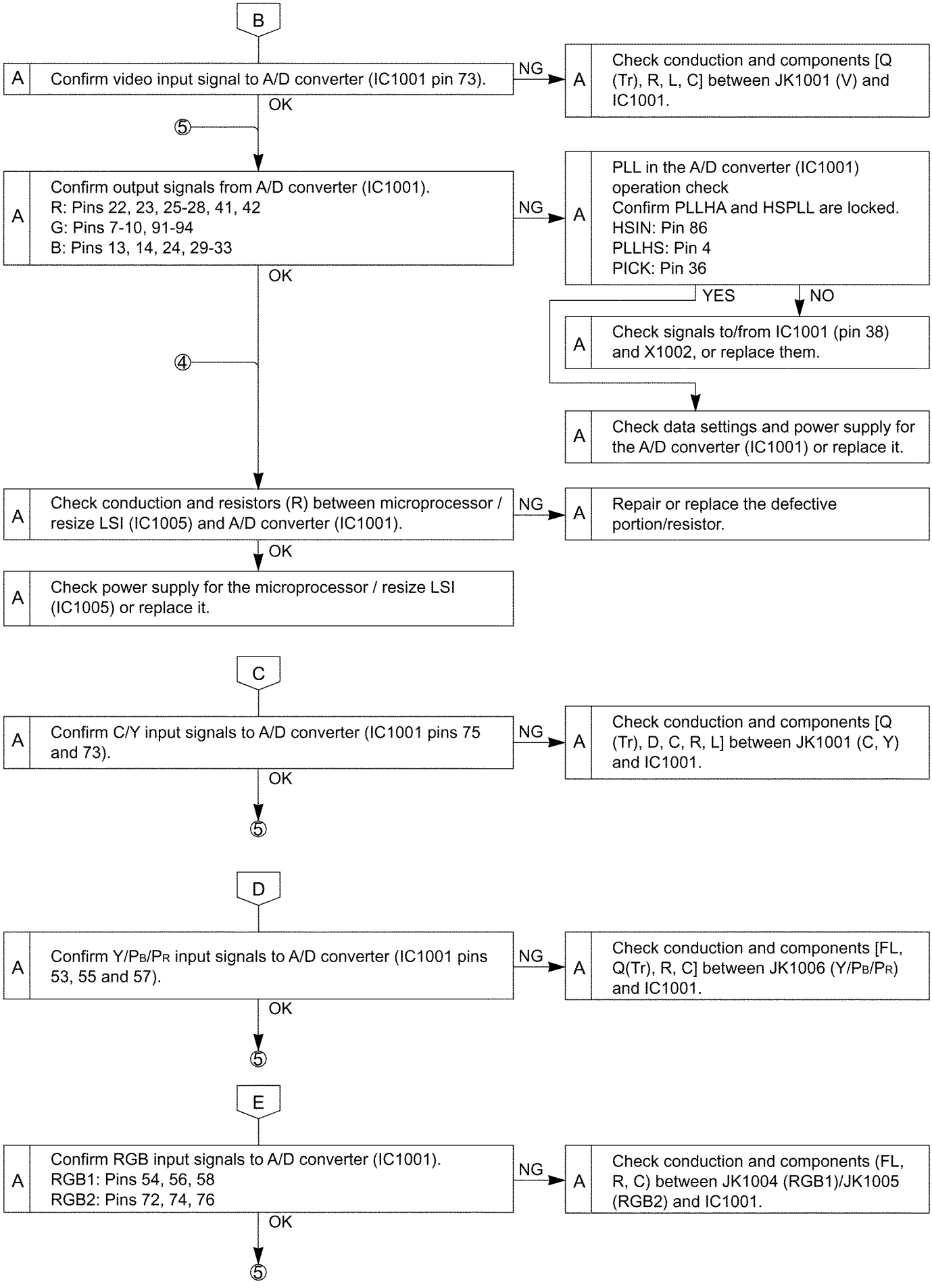

No lamp lights up. (LAMP indicator illuminates.)
Confirm every connector and the lamp unit are connected properly, and the lamp unit cover is installed.
At the same time, confirm the lamp unit fixing screws are tightened.
NO
Connect the connectors or install the cover properly.
YES
When switching from standby mode to an operating mode, every fan is rotated.
NO
Check every fan connector. If the connection is properly and the fan is not rotated, replace it. Then confirm the lamp lights up. (If not, go to the next.)
YES
Confirm every thermosensor is normal.
NO
Replace abnormal thermosensor, then confirm the lamp lights up. (If not, go to the next.)
YES
After keeping the power cord is unplugged for 3 minutes or more, plug in the power cord and press POWER button.
Confirm the ballast to generate a high-voltage pulse train and emits a sparking sound.
NO
A
When pressing the POWER button, connector A6 pin 15 changes from LOW to HIGH.
YES
NO
A3
YES
P
Confirm that no short circuit has occurred between connector P2 pins 1 and 3. (Normally, connector P2 pin 1 outputs 380 V ± 20 V DC.)
YES
A
When pressing the POWER button, connector A4 pin 2 changes from LOW to HIGH.
NO
A4
NO
P
Confirm that no short circuit has occurred between connector P2 pins 4 and 3. (Normally, connector P2 pin 4 outputs 15 V ± 1 V DC.)
YES
NO
①
②

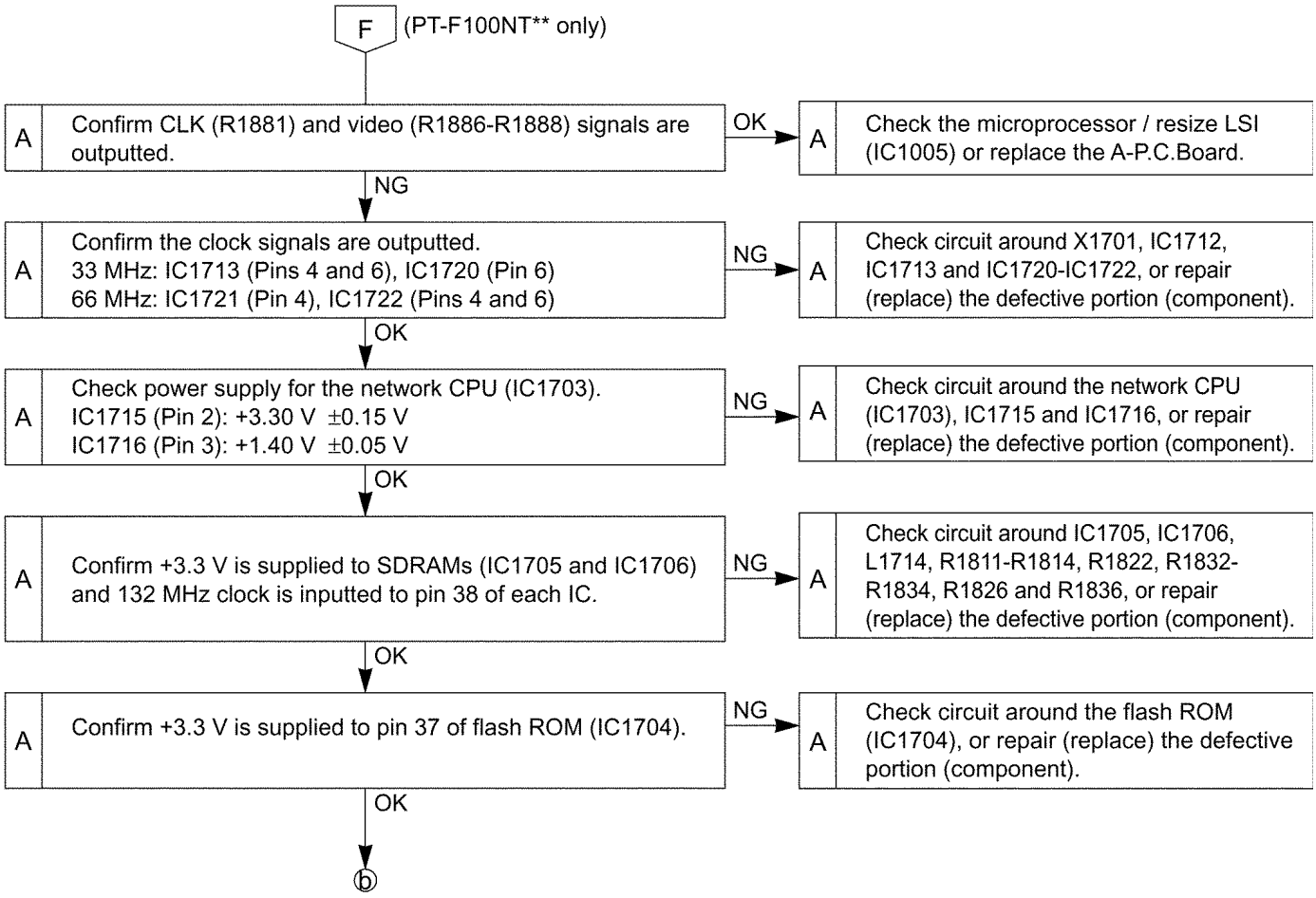

A1
Microprocessor / resize LSI (IC1005) operation check in the standby mode
A S1
POWER key check
When pressing SW2002, check voltage on L1044 becomes approx. 1.4 V.
NG
A S1
Check R1307, L1044, SW2002, R2001, R2002 and R2005.
OK
A3
A
Check voltage on R1373 becomes HIGH.
NG
A
Replace the microprocessor / resize LSI (IC1005).
OK
A
Replace Q1013.
A2
B
Confirm components D9604-D9609, D9611, D9612, Q9604, Q9605, Q9608 and Q9609 are normal (no damage).
NO
B
Replace every damaged component.
YES
B
Confirm resistance values between the terminals of ICs (IC9602 and IC9603) below are 3 kΩ or more.
6 (positive) - 7 (negative)
3 (positive) - 4 (negative)
NO
B
Confirm components D9616-D9629 are normal.
NO
YES
B
Replace IC9602/IC9603.
B
Replace every abnormal component.
YES
Replace the B-Module, then confirm the projector becomes standby mode.
YES
END
NO
A
Check CLK signal is outputted from the microprocessor / resize LSI (IC1005) pin 107.
YES
Check the circuit around IC1017 and IC1011, or replace the A-P.C.Board.
NO
A
The microprocessor / resize LSI is abnormal.
Check the microprocessor / resize LSI (IC1005) and circuit around it, crystal oscillator (X1001), clock generator (IC1040) and reset IC (IC1016), or replace the A-P.C.Board.
A4
A
Check voltage on R1314 becomes HIGH.
NG
A
Replace the microprocessor / resize LSI (IC1005).
OK
A
Replace Q1011.

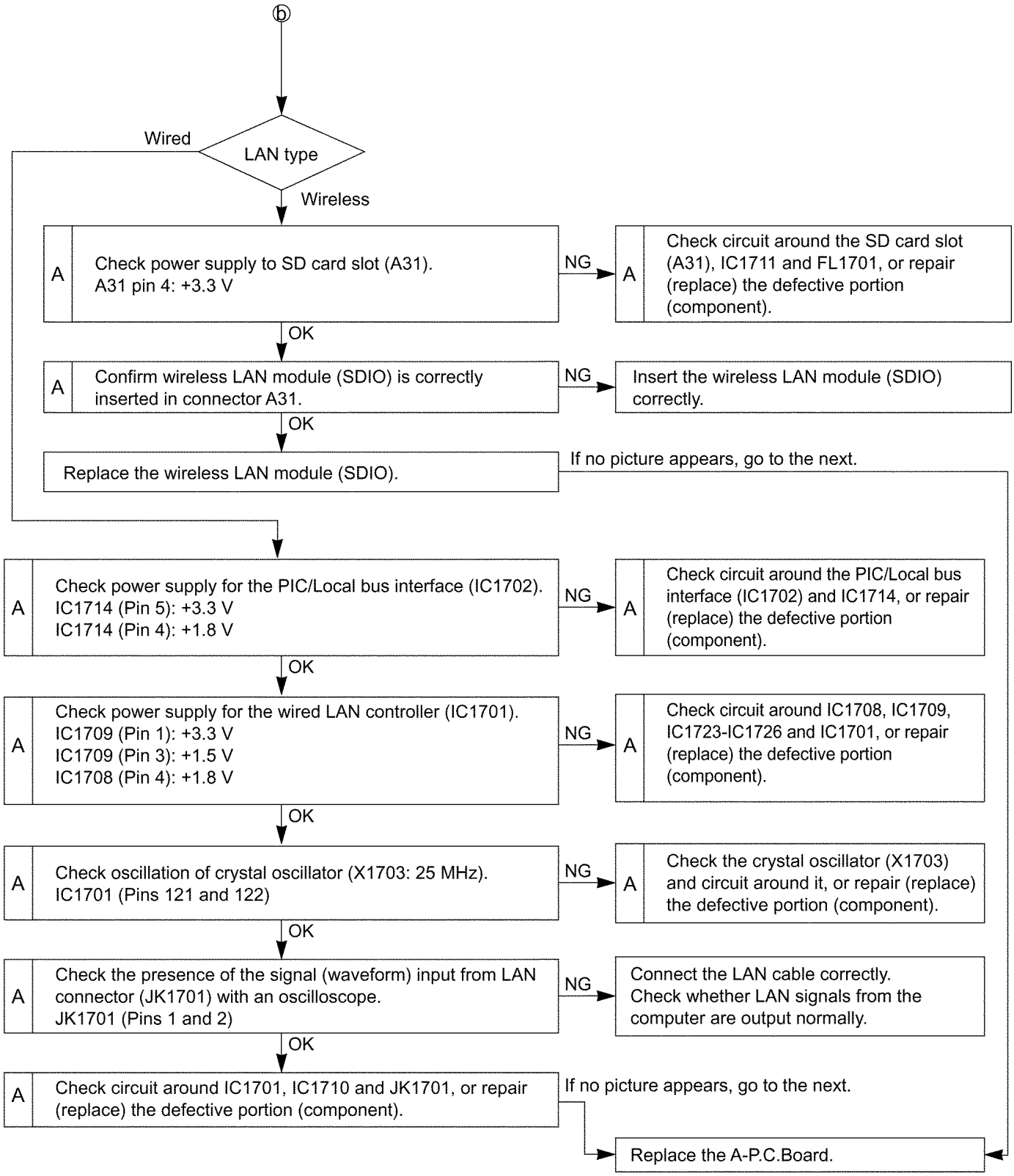

A shutdown occurs.
A M1 M2 M3
Abnormally high temperature is detected inside the projector and TEMP indicator illuminates or flashes. Check the following:
• Thermosensor connectors (A11-A13) are connected.
• The ambient temperature is less than 44 °C.
• The air filter does not accumulate dust.
Wait until the projector cools enough and turn on the power again.
A
If fan connectors (A16-A19) are not connected or the fans are stopped, a shutdown will occur. (TEMP and LAMP indicators are not illuminating.)
Confirm DC voltage is supplied to the fan.
NO
A
Confirm DC voltage (FAN13.5 V) is supplied to connector A6 pin 1.
YES
NO
Check the P-Module.
YES
Replace the fan.
OK
A
Check the fan voltage control ICs (IC1007-IC1010).
NG
A
Replace the IC.
If the microcomputer is out of order and temperature of the projector is not controlled, the thermofuse will be blown and the power will be stopped.
A
Microprocessor / resize LSI (IC1005) operation check
NG
A
Check the circuit around microprocessor / resize LSI (IC1005), or replace it.
OK
Replace the A-P.C.Board.
If ARF (Auto Rolling Filter) is not correctly installed, the shutdown will be occurred.
Is the ARF correctly installed?
NO
Is the ARF correctly installed?
YES
A
Is connector A23 correctly connected?
NO
Connect it correctly.
YES
F
Is connector F1 correctly connected?
NO
Connect it correctly.
YES
Replace the F-P.C.Board.

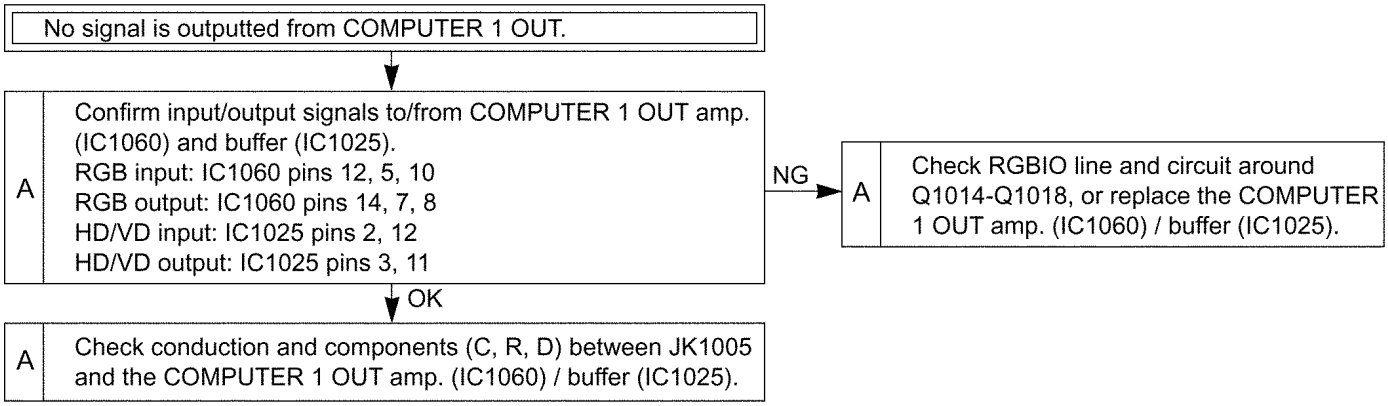

The lamp lights up abnormally. (LAMP indicator flashes.)
After keeping the power cord is unplugged for 3 minutes or more, plug in the power cord and press POWER button. Then confirm the lamp lights up.
NO
Replace the lamp unit.
YES
If the lamp goes out approximately 10 minutes after it lights up, the cumulative usage time of it exceeds 3 000 hours. Replace the lamp.
An abnormal picture or no picture appears.
A
Confirm every cable is connected.
Check the remote control unit / projector control panel operation.
NO
A
Connect or replace the cables.
If the central processing is abnormal, check the microprocessor / resize LSI (IC1005) and circuit around it, crystal oscillator (X1001), clock generator (IC1040) and reset IC (IC1016).
YES
No picture appears in VIDEO input mode.
B
No picture appears in S-VIDEO input mode.
C
No picture appears in COMPONENT (Y/PB/PR) input mode.
D
No picture appears in COMPUTER (RGB) input mode.
E
No picture appears in NETWORK input mode (PT-F100NT** only).
F
No picture appears. (Assuming that the microcomputer, lamp and remote control unit are normal.)
A
Confirm output waveforms on connectors A1, A2 and A3.
OK
Replace the LCD panel.
NG
A
Confirm clock signals (69 MHz) for the drive circuit.
Check crystal oscillator (X1001) and clock generator (IC1040).
NG
A
Replace the crystal oscillator (X1001) and/or clock generator (IC1040).
OK
③

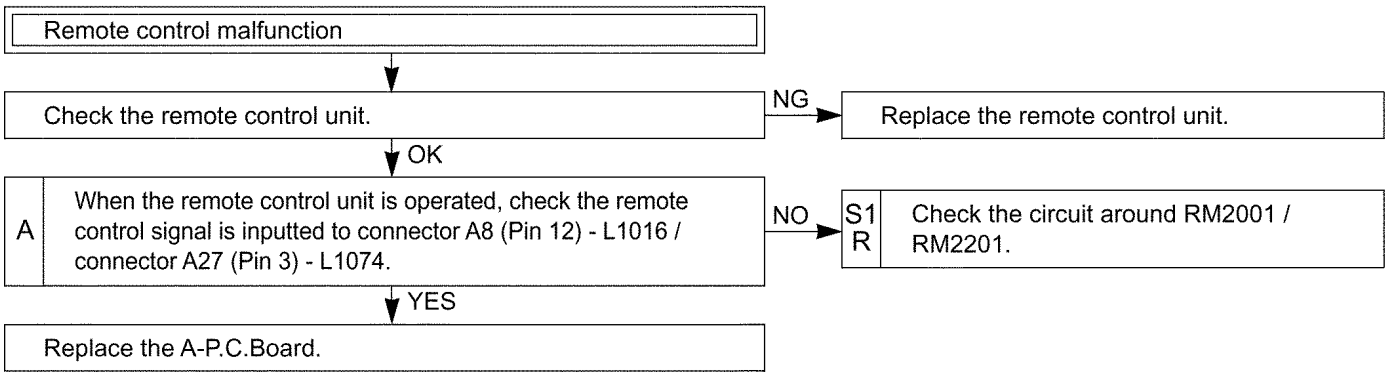

③
A
Check video data on test lands.
SH R, SH G, SH B
OK
A
Confirm waveforms on terminals of connectors A1, A2 and A3.
When they are normal, check the connectors.
When they are abnormal, check circuits between the sampling hold (IC1051-IC1053) / level shift (IC1054-IC1056) ICs output terminals and the connectors.
NG
A
Confirm output signals from LCD LSI (IC1200).
R1020-R1028
OK
A
Check the sampling hold (IC1051-IC1053) / level shift (IC1054-IC1056) ICs.
If they are abnormal, check the power supply or replace them.
NG
A
Confirm output signals from microprocessor / resize LSI (IC1005).
R1008-R1011, R1388, R1389 and R1391
NG
④
OK
A
Check conduction between the microprocessor / resize LSI (IC1005) and the LCD LSI (IC1200).
NG
A
Repair or replace the defective portion/component.
OK
A
Check LCD IC (IC1200).
NG
A
Replace the LCD IC.
OK
Replace the A-P.C.Board.

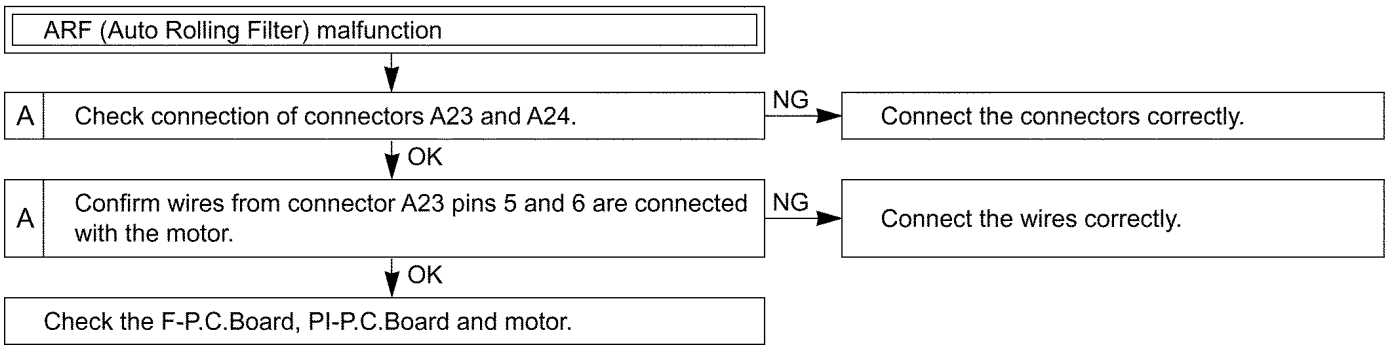

B
A
Confirm video input signal to A/D converter (IC1001 pin 73).
NG
A
Check conduction and components [Q (Tr), R, L, C] between JK1001 (V) and IC1001.
OK
⑤
A
Confirm output signals from A/D converter (IC1001).
R: Pins 22, 23, 25-28, 41, 42
G: Pins 7-10, 91-94
B: Pins 13, 14, 24, 29-33
NG
A
PLL in the A/D converter (IC1001) operation check
Confirm PLLHA and HSPLL are locked.
HSIN: Pin 86
PLLHS: Pin 4
PICK: Pin 36
OK
YES
NO
A
Check signals to/from IC1001 (pin 38) and X1002, or replace them.
④
A
Check data settings and power supply for the A/D converter (IC1001) or replace it.
A
Check conduction and resistors (R) between microprocessor / resize LSI (IC1005) and A/D converter (IC1001).
NG
A
Repair or replace the defective portion/resistor.
OK
A
Check power supply for the microprocessor / resize LSI (IC1005) or replace it.
C
A
Confirm C/Y input signals to A/D converter (IC1001 pins 75 and 73).
NG
A
Check conduction and components [Q (Tr), D, C, R, L] between JK1001 (C, Y) and IC1001.
OK
⑤
D
A
Confirm Y/PB/PR input signals to A/D converter (IC1001 pins 53, 55 and 57).
NG
A
Check conduction and components [FL, Q(Tr), R, C] between JK1006 (Y/PB/PR) and IC1001.
OK
⑤
E
A
Confirm RGB input signals to A/D converter (IC1001).
RGB1: Pins 54, 56, 58
RGB2: Pins 72, 74, 76
NG
A
Check conduction and components (FL, R, C) between JK1004 (RGB1)/JK1005 (RGB2) and IC1001.
OK
⑤

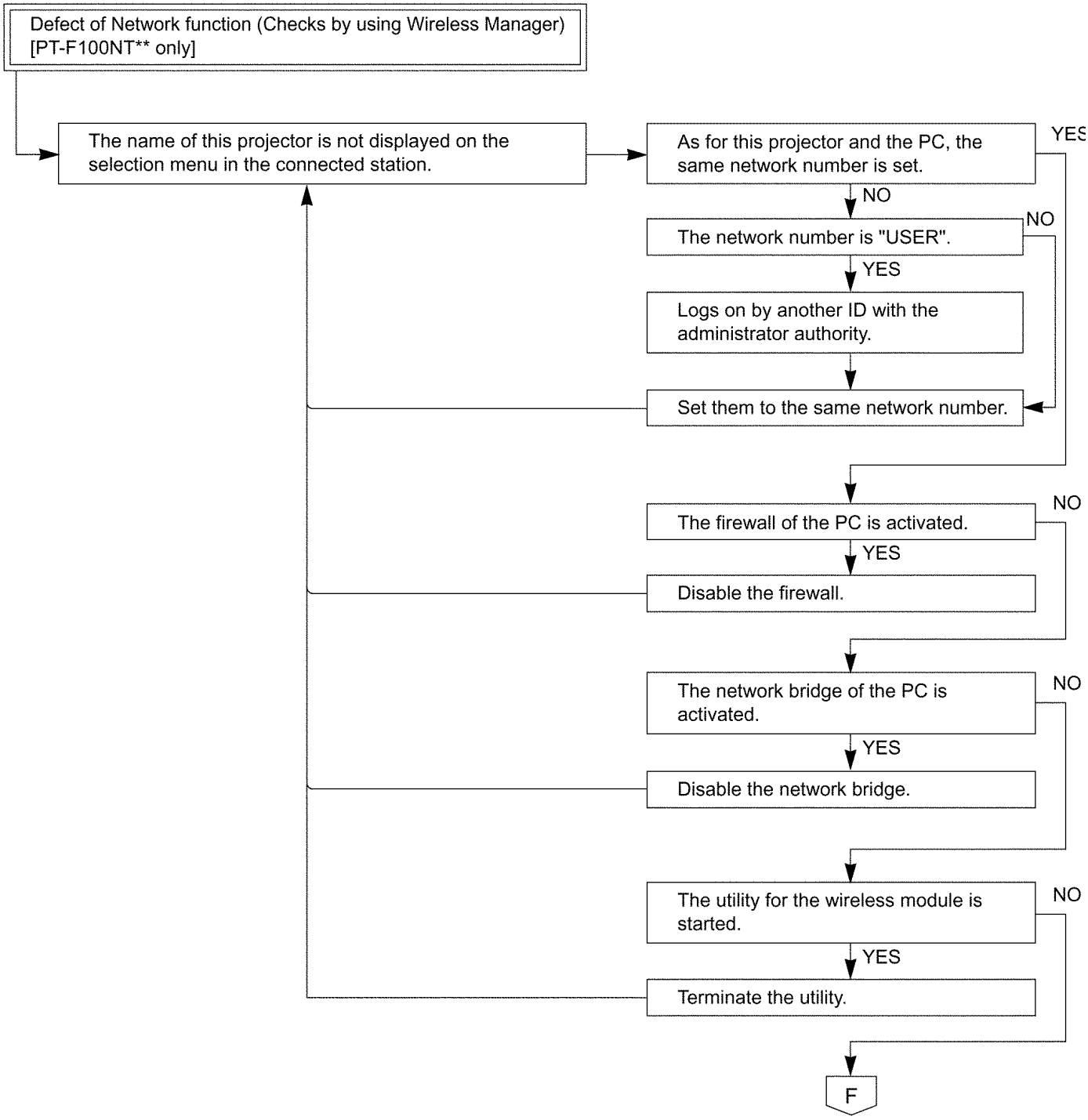

F
(PT-F100NT** only)
A
Confirm CLK (R1881) and video (R1886-R1888) signals are outputted.
OK
A
Check the microprocessor / resize LSI (IC1005) or replace the A-P.C.Board.
NG
A
Confirm the clock signals are outputted.
33 MHz: IC1713 (Pins 4 and 6), IC1720 (Pin 6)
66 MHz: IC1721 (Pin 4), IC1722 (Pins 4 and 6)
NG
A
Check circuit around X1701, IC1712, IC1713 and IC1720-IC1722, or repair (replace) the defective portion (component).
OK
A
Check power supply for the network CPU (IC1703).
IC1715 (Pin 2): +3.30 V ±0.15 V
IC1716 (Pin 3): +1.40 V ±0.05 V
NG
A
Check circuit around the network CPU (IC1703), IC1715 and IC1716, or repair (replace) the defective portion (component).
OK
A
Confirm +3.3 V is supplied to SDRAMs (IC1705 and IC1706) and 132 MHz clock is inputted to pin 38 of each IC.
NG
A
Check circuit around IC1705, IC1706, L1714, R1811-R1814, R1822, R1832-R1834, R1826 and R1836, or repair (replace) the defective portion (component).
OK
A
Confirm +3.3 V is supplied to pin 37 of flash ROM (IC1704).
NG
A
Check circuit around the flash ROM (IC1704), or repair (replace) the defective portion (component).
OK
ⓑ


ⓑ
LAN type
Wired
Wireless
A
Check power supply to SD card slot (A31).
A31 pin 4: +3.3 V
NG
A
Check circuit around the SD card slot (A31), IC1711 and FL1701, or repair (replace) the defective portion (component).
OK
A
Confirm wireless LAN module (SDIO) is correctly inserted in connector A31.
NG
Insert the wireless LAN module (SDIO) correctly.
OK
Replace the wireless LAN module (SDIO).
If no picture appears, go to the next.
A
Check power supply for the PIC/Local bus interface (IC1702).
IC1714 (Pin 5): +3.3 V
IC1714 (Pin 4): +1.8 V
NG
A
Check circuit around the PIC/Local bus interface (IC1702) and IC1714, or repair (replace) the defective portion (component).
OK
A
Check power supply for the wired LAN controller (IC1701).
IC1709 (Pin 1): +3.3 V
IC1709 (Pin 3): +1.5 V
IC1708 (Pin 4): +1.8 V
NG
A
Check circuit around IC1708, IC1709, IC1723-IC1726 and IC1701, or repair (replace) the defective portion (component).
OK
A
Check oscillation of crystal oscillator (X1703: 25 MHz).
IC1701 (Pins 121 and 122)
NG
A
Check the crystal oscillator (X1703) and circuit around it, or repair (replace) the defective portion (component).
OK
A
Check the presence of the signal (waveform) input from LAN connector (JK1701) with an oscilloscope.
JK1701 (Pins 1 and 2)
NG
Connect the LAN cable correctly.
Check whether LAN signals from the computer are output normally.
OK
A
Check circuit around IC1701, IC1710 and JK1701, or repair (replace) the defective portion (component).
If no picture appears, go to the next.
Replace the A-P.C.Board.


No signal is outputted from COMPUTER 1 OUT.
A
Confirm input/output signals to/from COMPUTER 1 OUT amp. (IC1060) and buffer (IC1025).
RGB input: IC1060 pins 12, 5, 10
RGB output: IC1060 pins 14, 7, 8
HD/VD input: IC1025 pins 2, 12
HD/VD output: IC1025 pins 3, 11
NG
A
Check RGBIO line and circuit around Q1014-Q1018, or replace the COMPUTER 1 OUT amp. (IC1060) / buffer (IC1025).
OK
A
Check conduction and components (C, R, D) between JK1005 and the COMPUTER 1 OUT amp. (IC1060) / buffer (IC1025).


Remote control malfunction
Check the remote control unit.
NG
Replace the remote control unit.
OK
A
When the remote control unit is operated, check the remote control signal is inputted to connector A8 (Pin 12) - L1016 / connector A27 (Pin 3) - L1074.
NO
S1
R
Check the circuit around RM2001 / RM2201.
YES
Replace the A-P.C.Board.

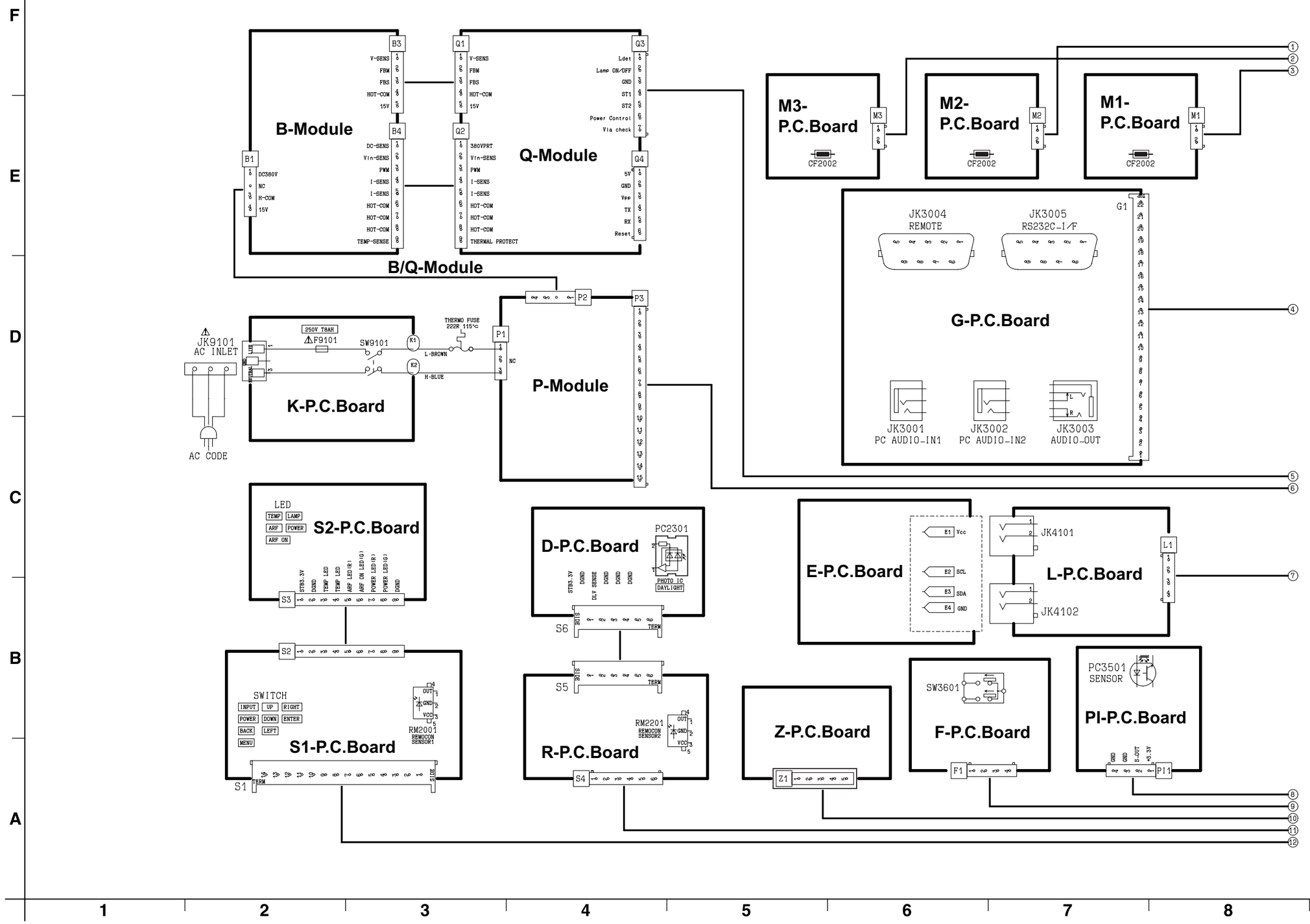

ARF (Auto Rolling Filter) malfunction
A
Check connection of connectors A23 and A24.
NG
Connect the connectors correctly.
OK
A
Confirm wires from connector A23 pins 5 and 6 are connected with the motor.
NG
Connect the wires correctly.
OK
Check the F-P.C.Board, PI-P.C.Board and motor.


Defect of Network function (Checks by using Wireless Manager) [PT-F100NT** only]
The name of this projector is not displayed on the selection menu in the connected station.
As for this projector and the PC, the same network number is set.
YES
NO
The network number is "USER".
NO
YES
Logs on by another ID with the administrator authority.
Set them to the same network number.
The firewall of the PC is activated.
NO
YES
Disable the firewall.
The network bridge of the PC is activated.
NO
YES
Disable the network bridge.
The utility for the wireless module is started.
NO
YES
Terminate the utility.
F

10 Interconnection Block Diagram

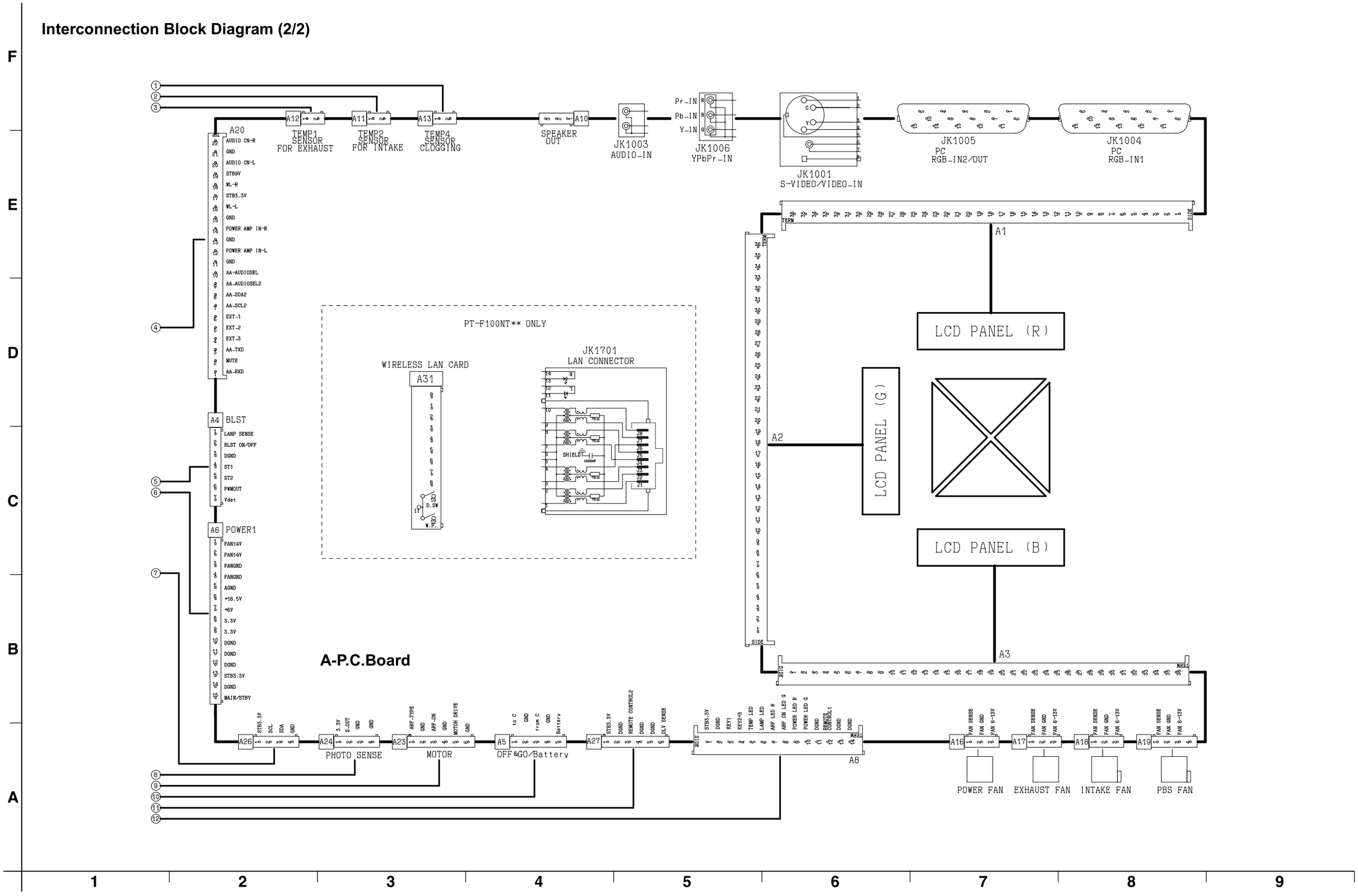
10.1. Interconnection Block Diagram (1/2)

Interconnection Block Diagram (1/2)



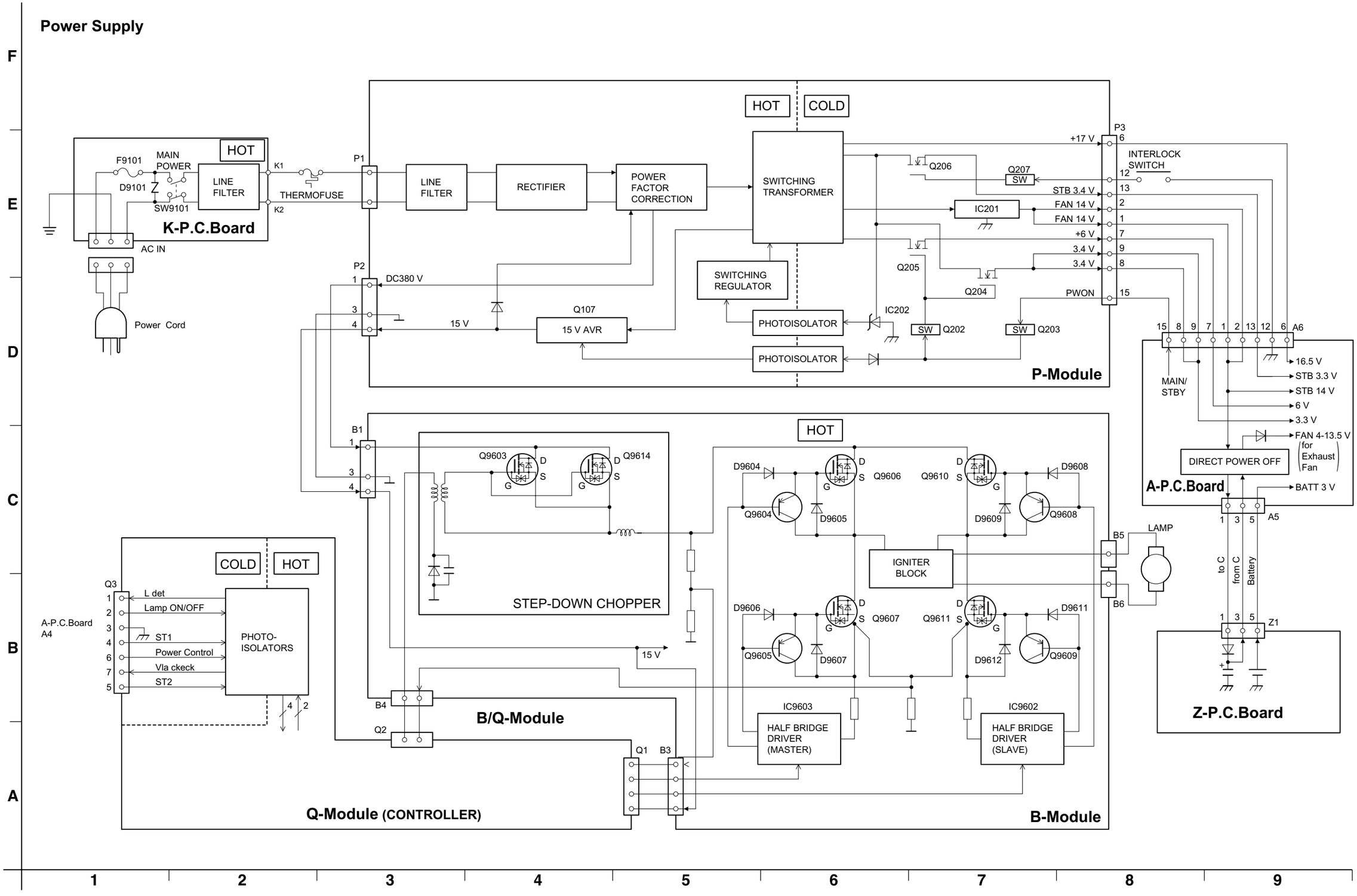
10.2. Interconnection Block Diagram (2/2)

Interconnection Block Diagram (2/2)



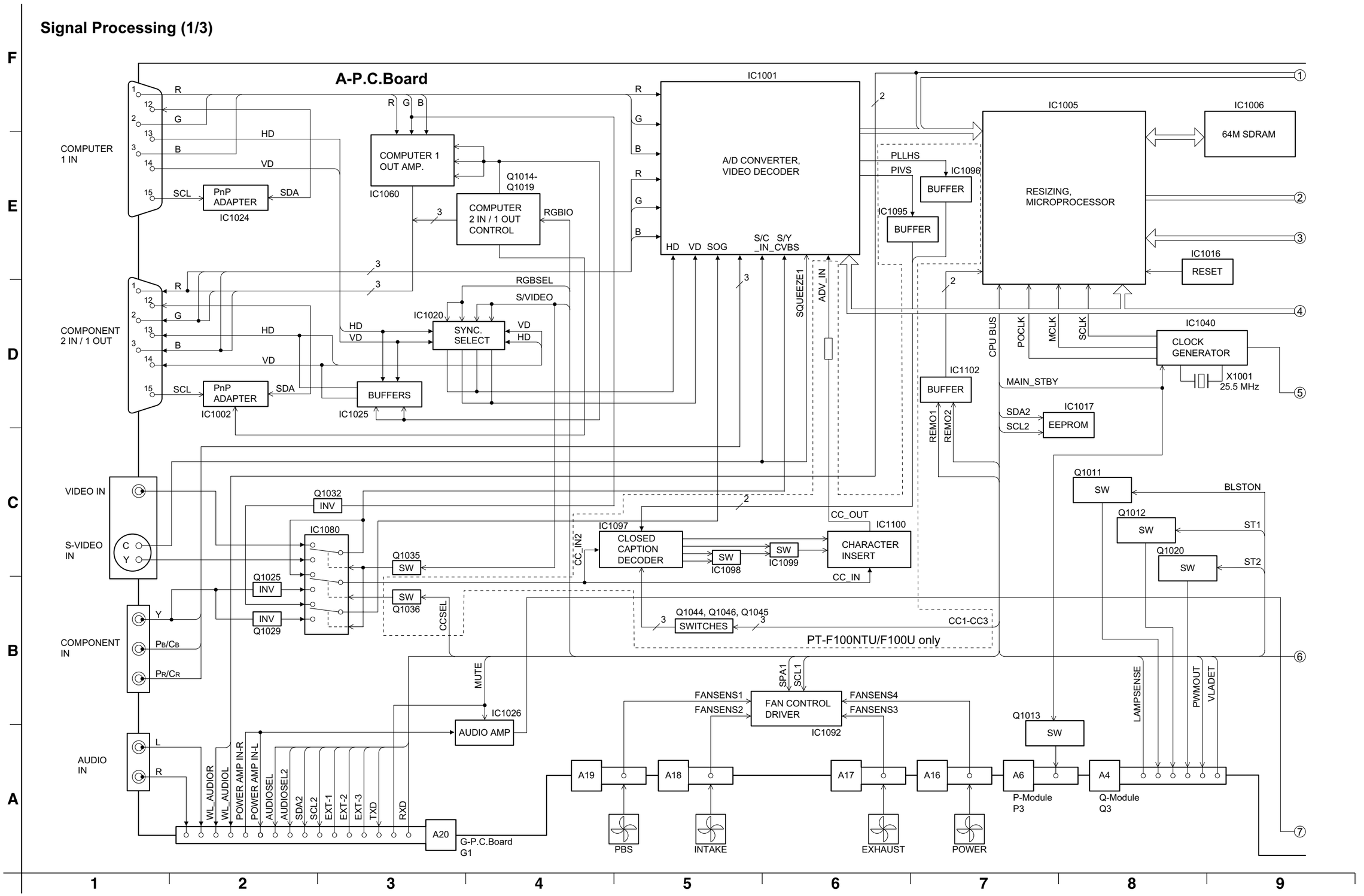
11 Block Diagram

11.1. Power Supply

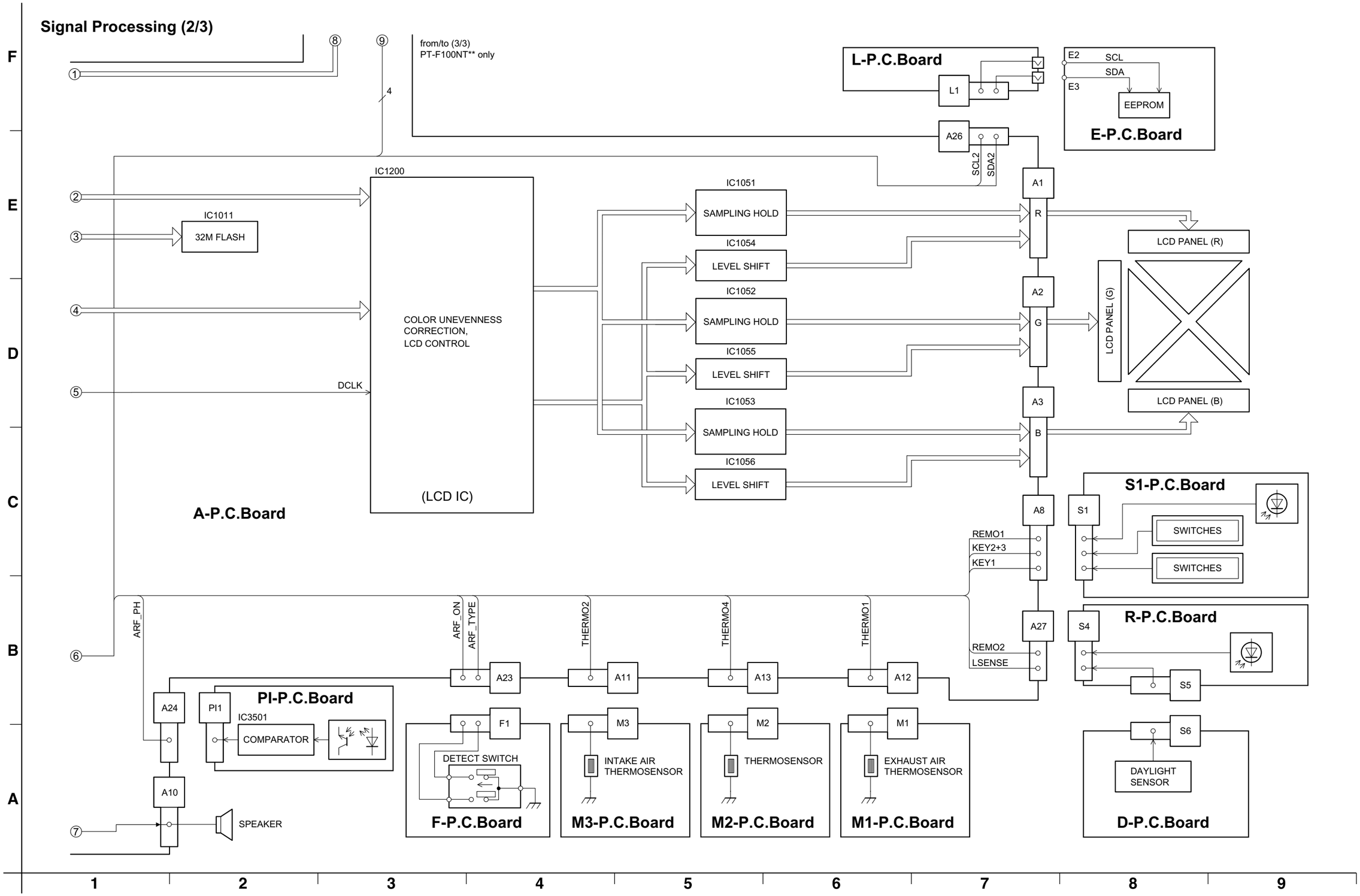


11.2. Signal Processing (1/3)

Signal Processing (1/3)

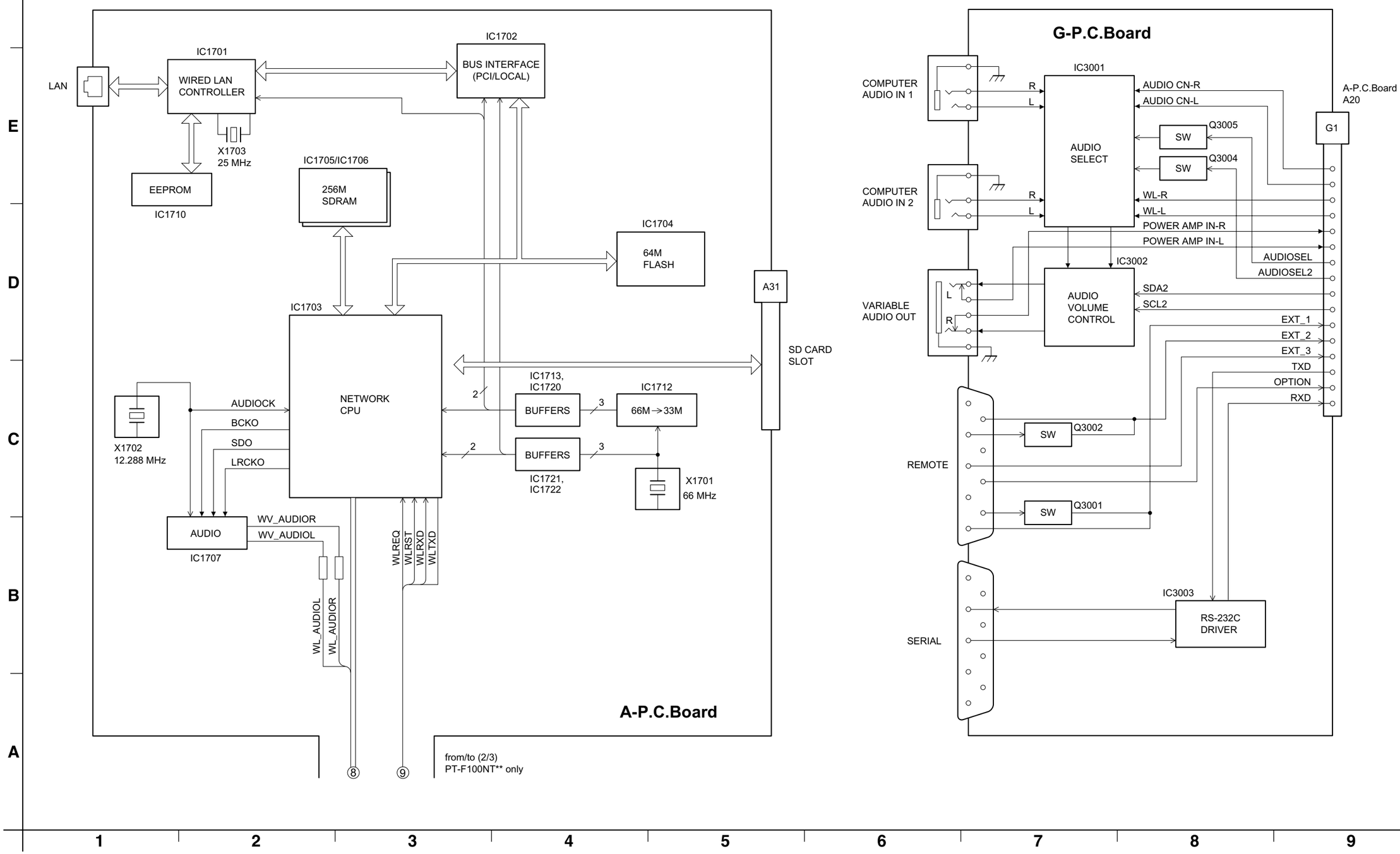


11.3. Signal Processing (2/3)



11.4. Signal Processing (3/3)

Signal Processing (3/3)



12 Schematic Diagram

Schematic Diagram for Model PT-F100NTU, PT-F100U

IMPORTANT SAFETY NOTICE

THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM FIRE AND ELECTRICAL SHOCK HAZARDS.
WHEN SERVICING, IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF THE SCHEMATIC.

Schematic Diagram for Model PT-F100NTE/EA, PT-F100E/EA

Important Safety Notice

Components identified by the international symbol ⚠ have special characteristics important for safety. When replacing any of these components, use only the manufacturer's specified ones.

Notes:

1. **Resistor**

   All the resistors are carbon 1/4W resistors, unless marked as follows: The unit of resistance is an OHM [Ω] (K=1 000 M=1 000 000).

   ○ : Nonflammable
   ⊠ : Metal Oxide
   △ : Solid
   ◎ : Metal Film
   ⊘ : Wire Wound
   ⊗ : Fuse

2. **Capacitor**

   ⊗ : Temperature Compensation
   ⧺ : Electrolytic
   Ⓜ : Polyester
   NP ⧺ : Bipolar
   ⓜ : Metalized Polyester
   Ⓣ : Dipped Tantalum
   ⊠ : Polypropylene
   Ⓩ : Z-Type

3. **Coil**

   The unit of inductance is a H, unless otherwise noted.

4. **Test Point**

   : Test Point

5. **Voltage Measurement**

   The voltage is measured by an electronic voltmeter receiving the colorbar signal when all the customer's controls are set to the standard condition.

6. **Color code for the links between diagrams and circuit boards**

From/To		To/From	Color code
Block diagram	⟷	Schematic diagram	Magenta
Schematic diagram	⟷	Schematic diagram	Green
Schematic diagram	⟷	Circuit boards	Yellow
Schematic diagram	⟷	Waveforms	Cyan (Light blue)

7. **HOT and COLD indications**

   The power circuit board contains a circuit area using a separate power supply to isolate the ground connection. The circuit is defined by HOT and COLD indications in the schematic diagram. Take the precautions below:

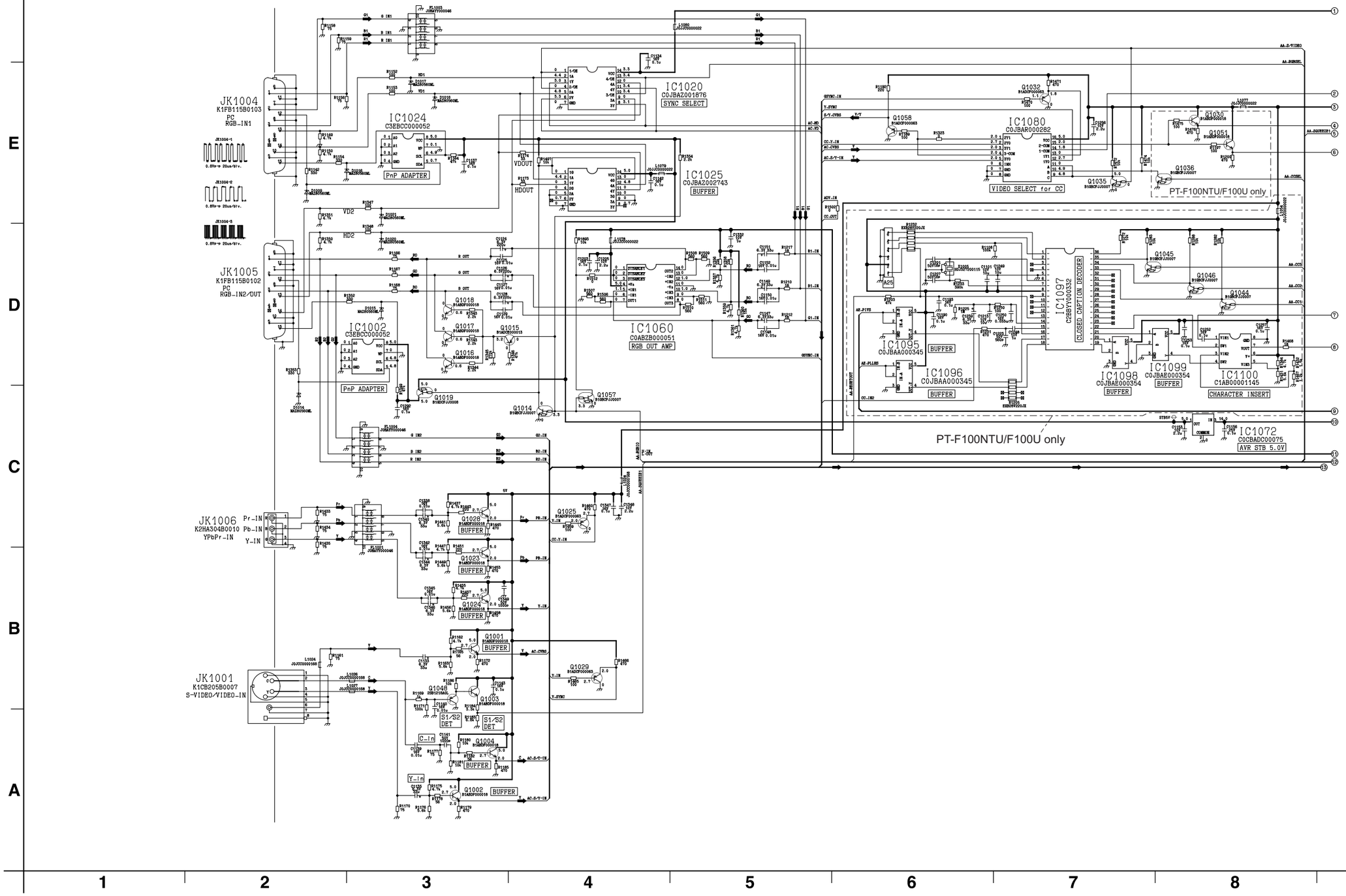
8. **This schematic diagram is the latest at the time of printing and the subject to change without notice.**

Precautions:

1. NEVER touch the HOT part or the HOT and COLD parts at the same time, or you may get an electric shock.
2. NEVER short-circuit the HOT and COLD circuits, or the fuse may blow and the parts may break.
3. NEVER connect an instrument such oscilloscope to the HOT and COLD circuit simultaneously, or the fuse may blow.Connect the ground of instruments to the ground of the circuit being measured.
4. MAKE SURE to unplug the power cord from the power outlet before removing the chassis.

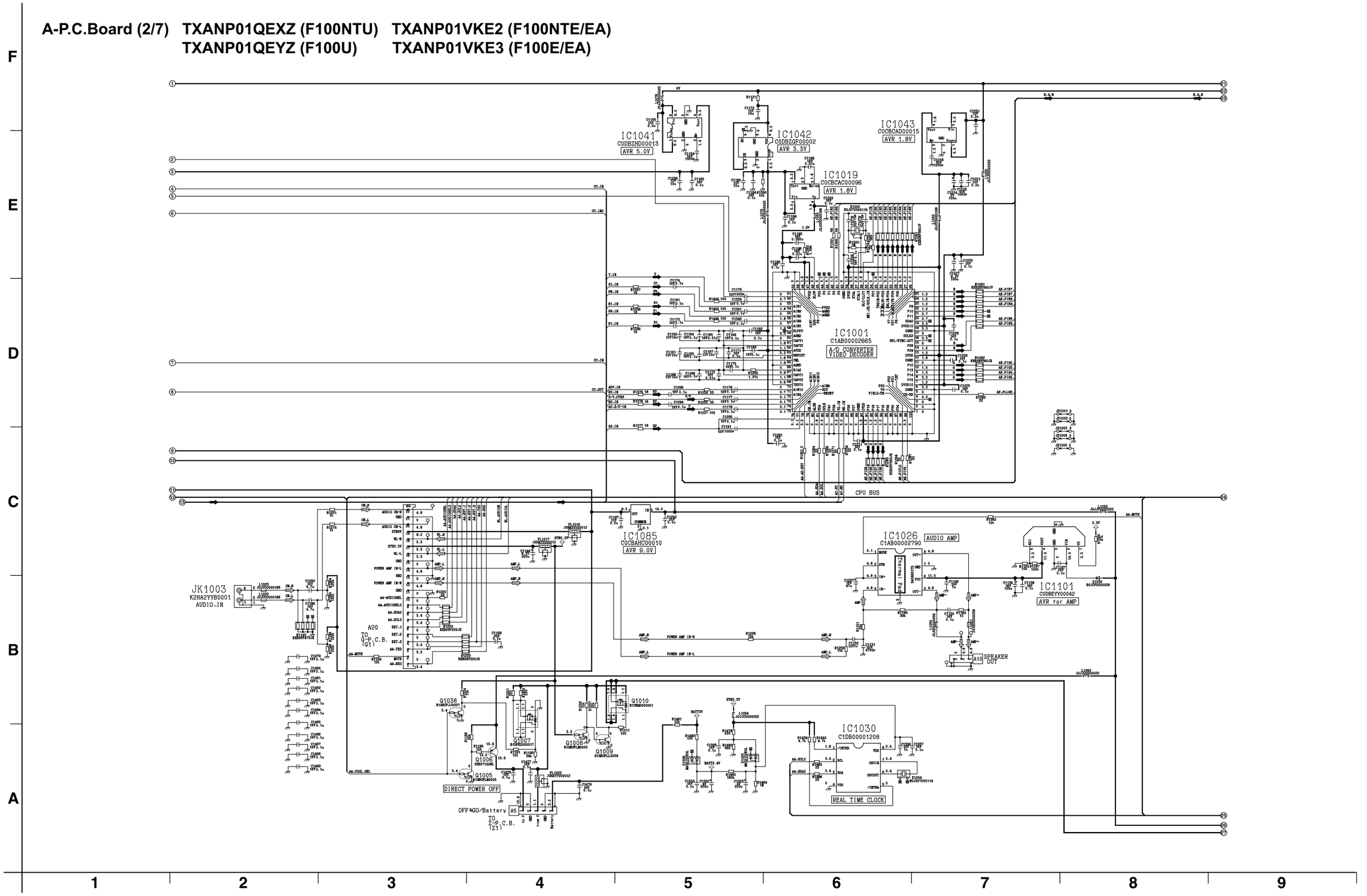
12.1. A-P.C.Board (1/7)

A-P.C.Board (1/7) TXANP01QEXZ (F100NTU) TXANP01VKE2 (F100NTE/EA)
TXANP01QEYZ (F100U) TXANP01VKE3 (F100E/EA)



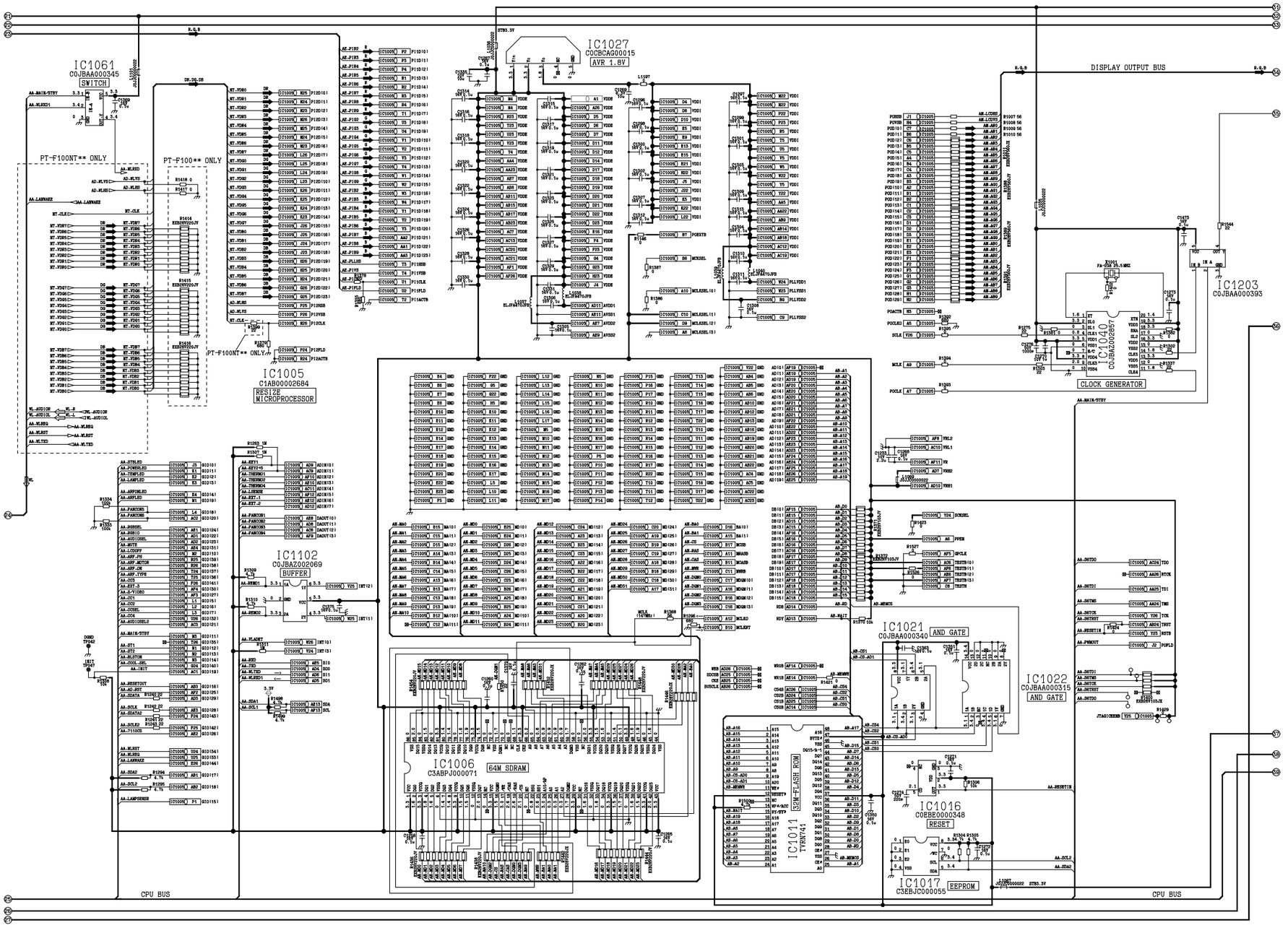
12.2. A-P.C.Board (2/7)

A-P.C.Board (2/7) **TXANP01QEXZ (F100NTU)** **TXANP01VKE2 (F100NTE/EA)**
TXANP01QEYZ (F100U) **TXANP01VKE3 (F100E/EA)**



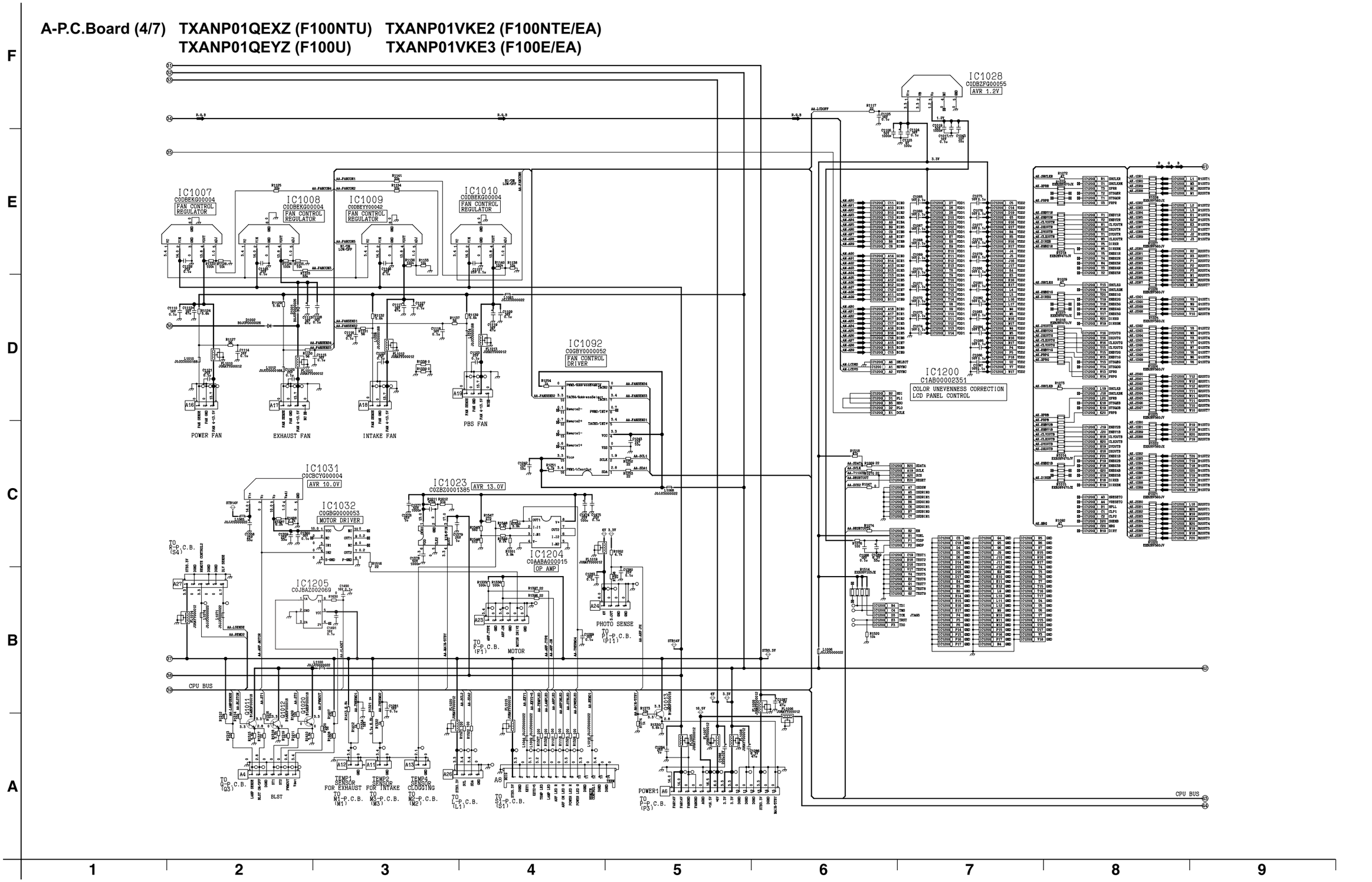
12.3. A-P.C.Board (3/7)

A-P.C.Board (3/7) TXANP01QEXZ (F100NTU) TXANP01VKE2 (F100NTE/EA)
TXANP01QEYZ (F100U) TXANP01VKE3 (F100E/EA)



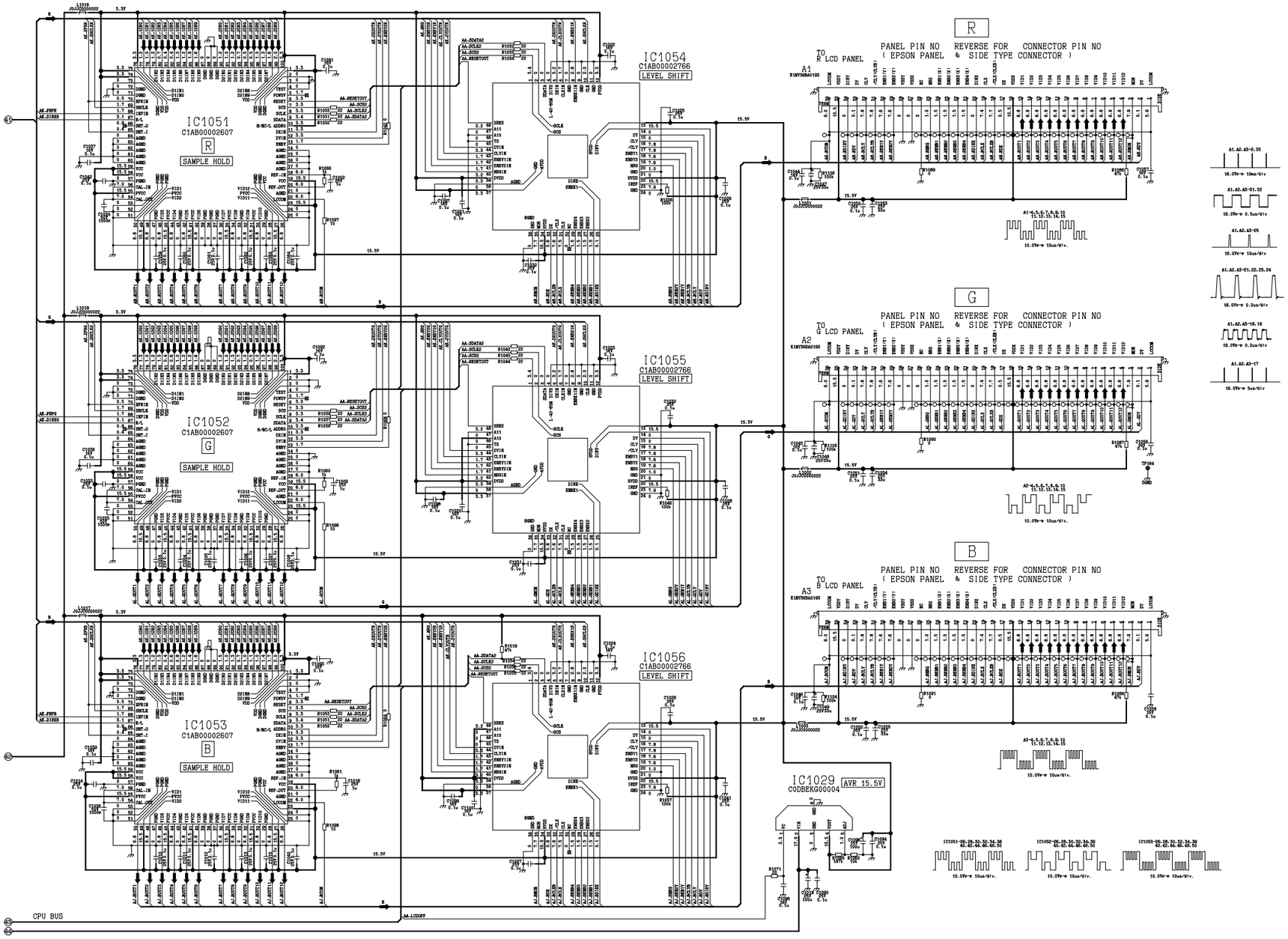
12.4. A-P.C.Board (4/7)

A-P.C.Board (4/7) **TXANP01QEXZ (F100NTU)** **TXANP01VKE2 (F100NTE/EA)**
TXANP01QEYZ (F100U) **TXANP01VKE3 (F100E/EA)**



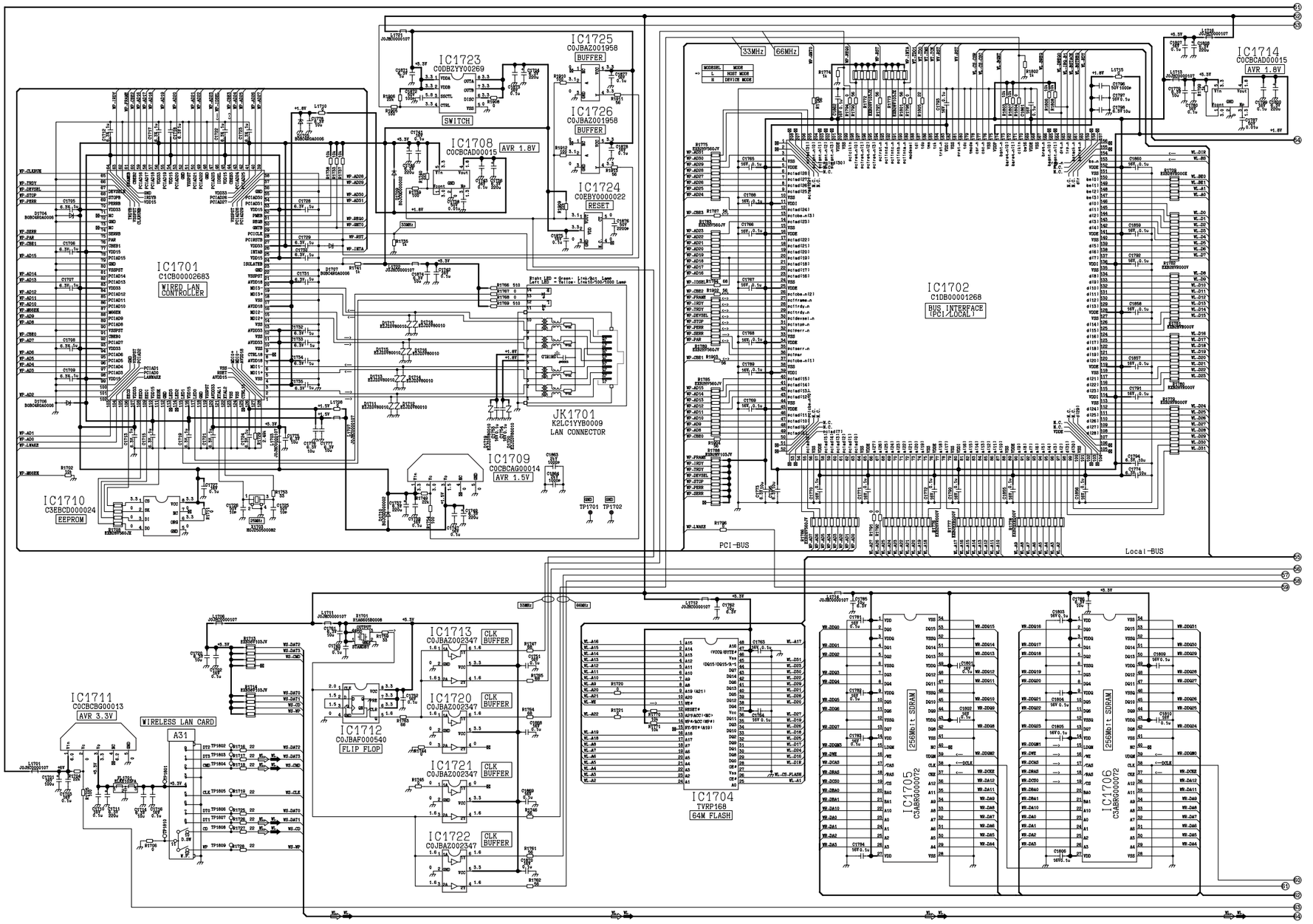
12.5. A-P.C.Board (5/7)

A-P.C.Board (5/7) TXANP01QEXZ (F100NTU) TXANP01VKE2 (F100NTE/EA)
TXANP01QEYZ (F100U) TXANP01VKE3 (F100E/EA)



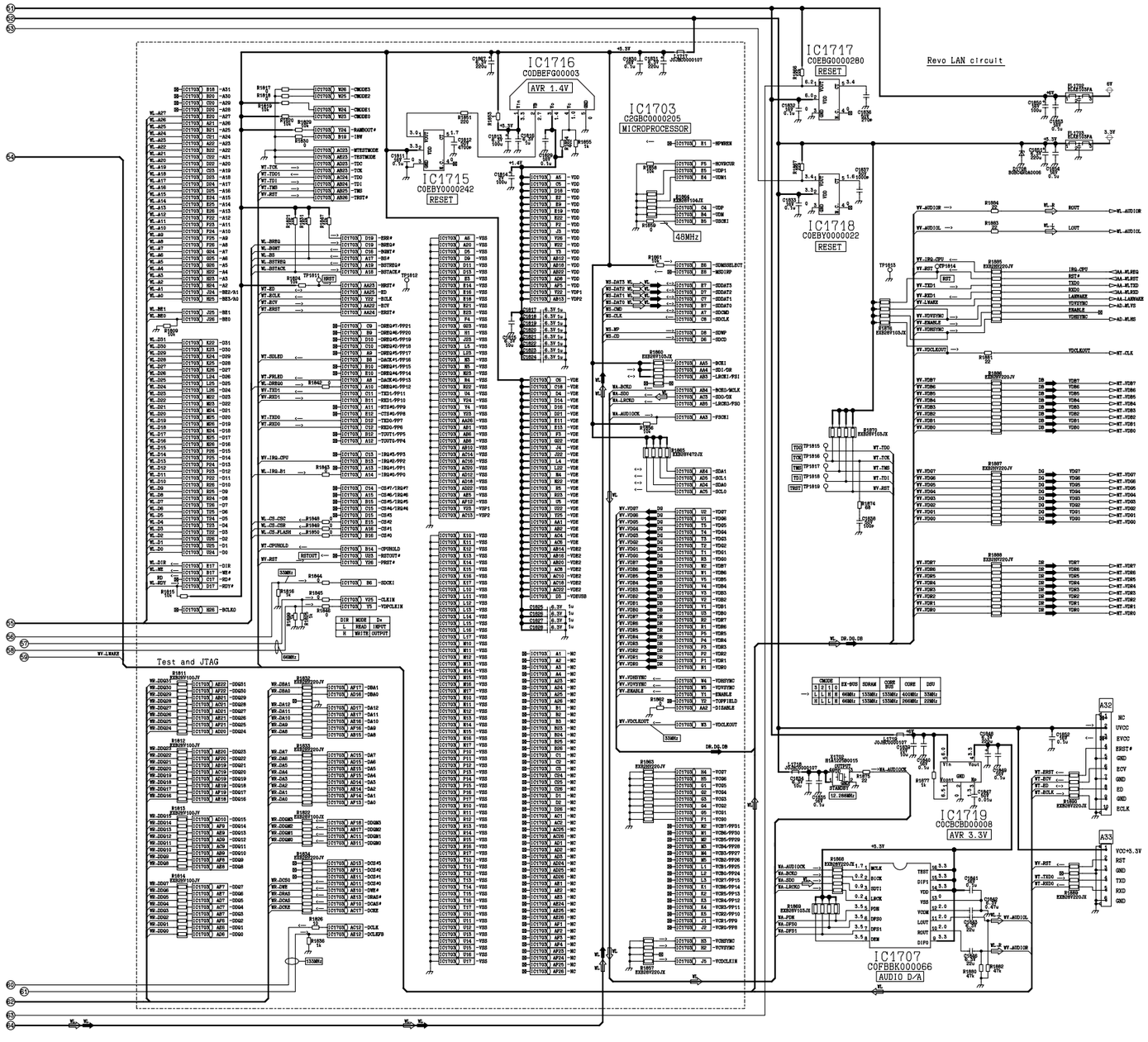
12.6. A-P.C.Board (6/7)

A-P.C.Board (6/7) (PT-F100NT**only) TXANP01QEXZ (F100NTU) TXANP01VKE2 (F100NTE/EA)



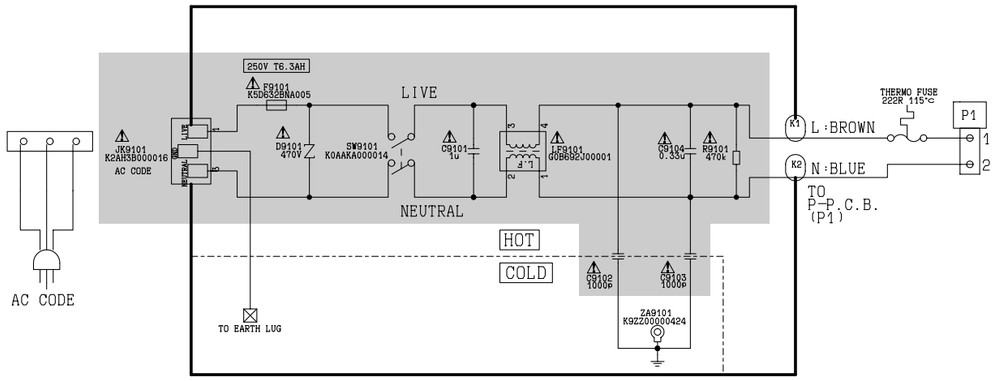
12.7. A-P.C.Board (7/7)

A-P.C.Board (7/7) (PT-F100NT**only) TXANP01QEXZ (F100NTU) TXANP01VKE2 (F100NTE/EA)

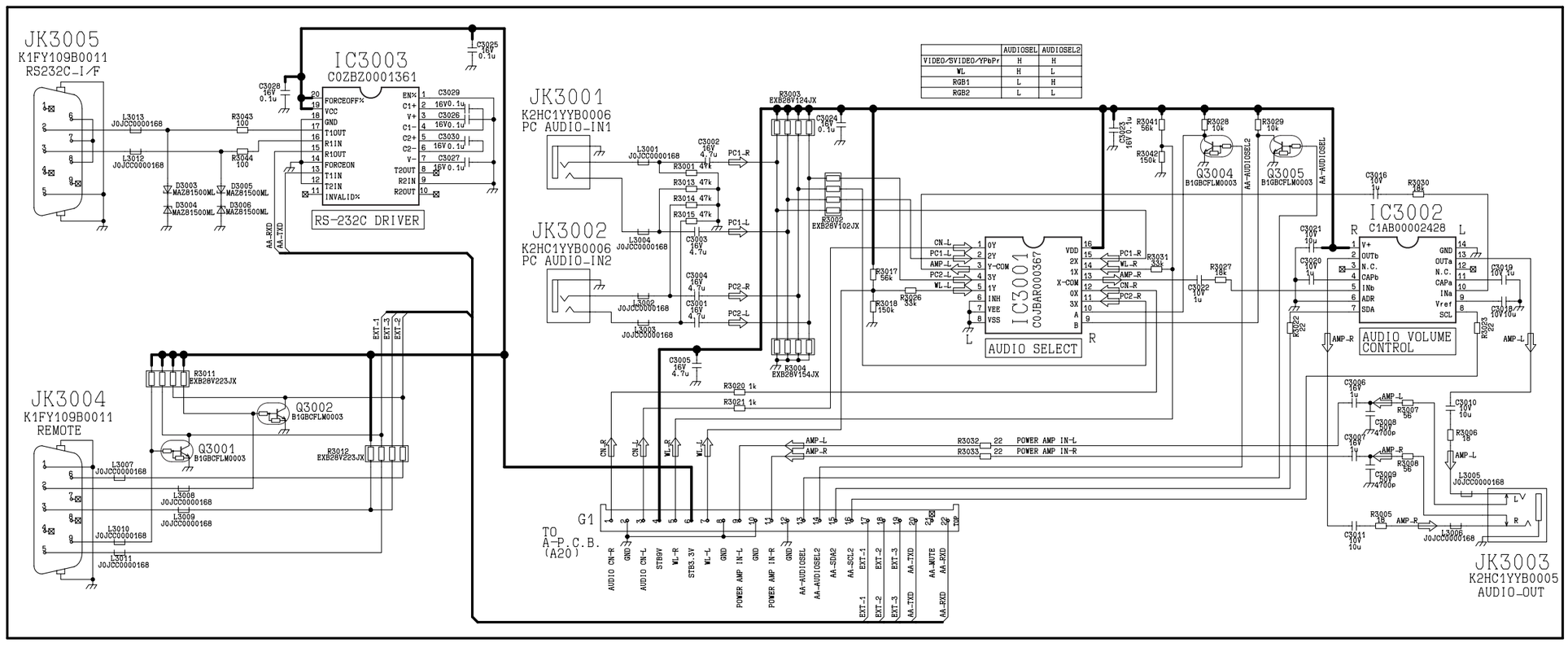


12.8. K-P.C.Board, G-P.C.Board

K-P.C.Board TXANP02QEXZ



G-P.C.Board TNPA4209

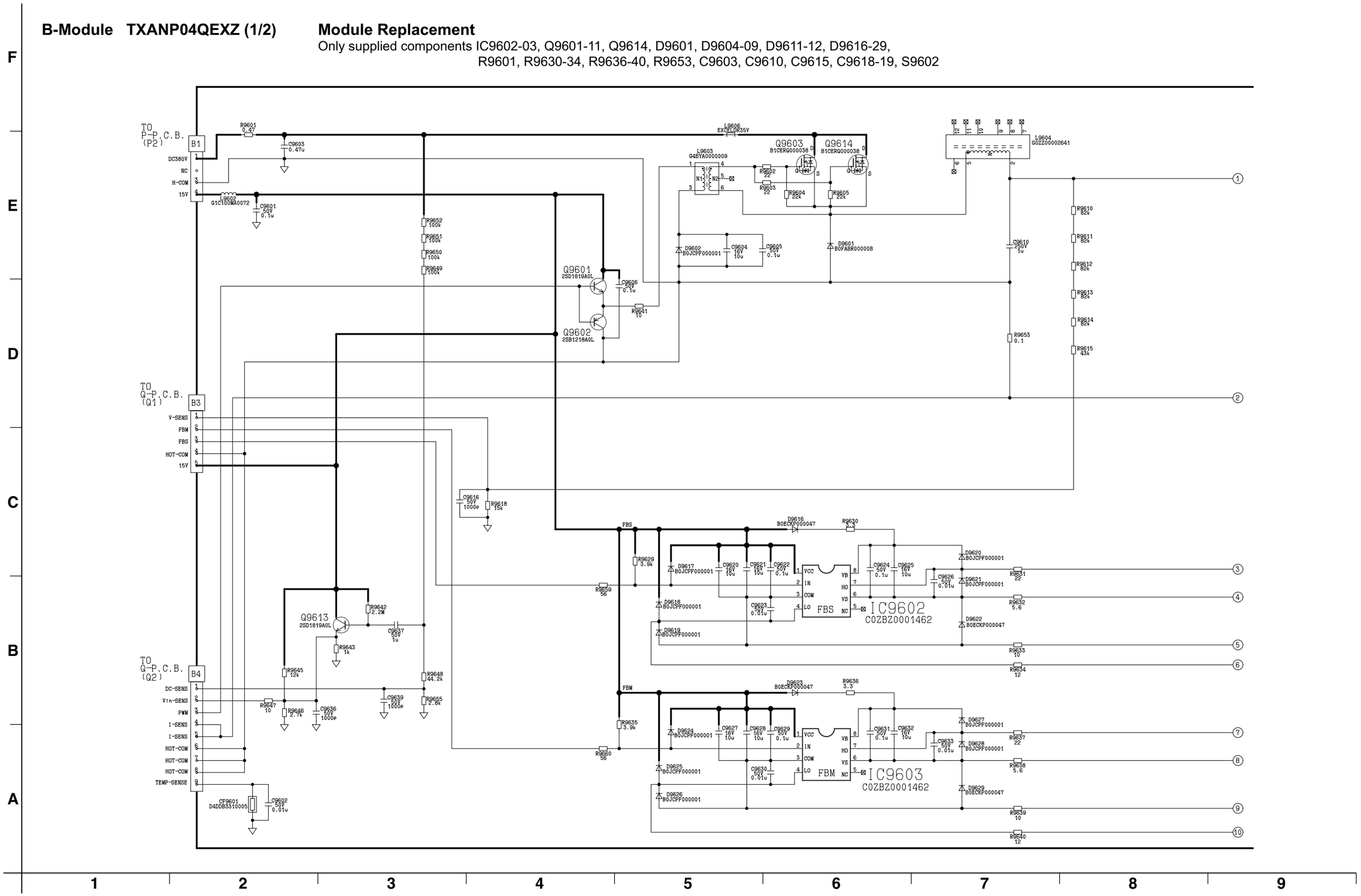


12.9. B-Module (1/2)

B-Module TXANP04QEXZ (1/2)

Module Replacement

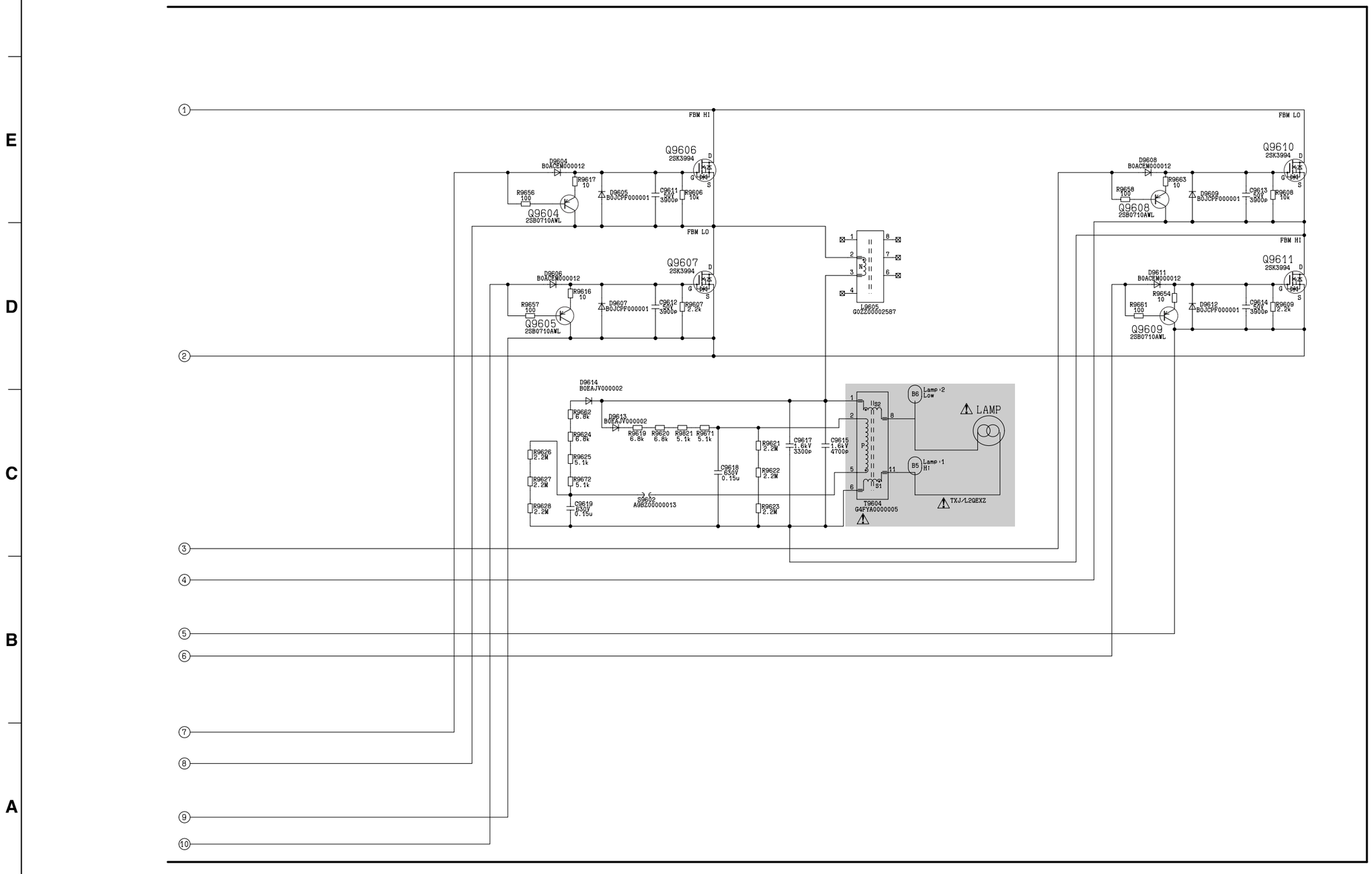
Only supplied components IC9602-03, Q9601-11, Q9614, D9601, D9604-09, D9611-12, D9616-29, R9601, R9630-34, R9636-40, R9653, C9603, C9610, C9615, C9618-19, S9602



12.10. B-Module (2/2)

B-Module TXANP04QEXZ (2/2) **Module Replacement**

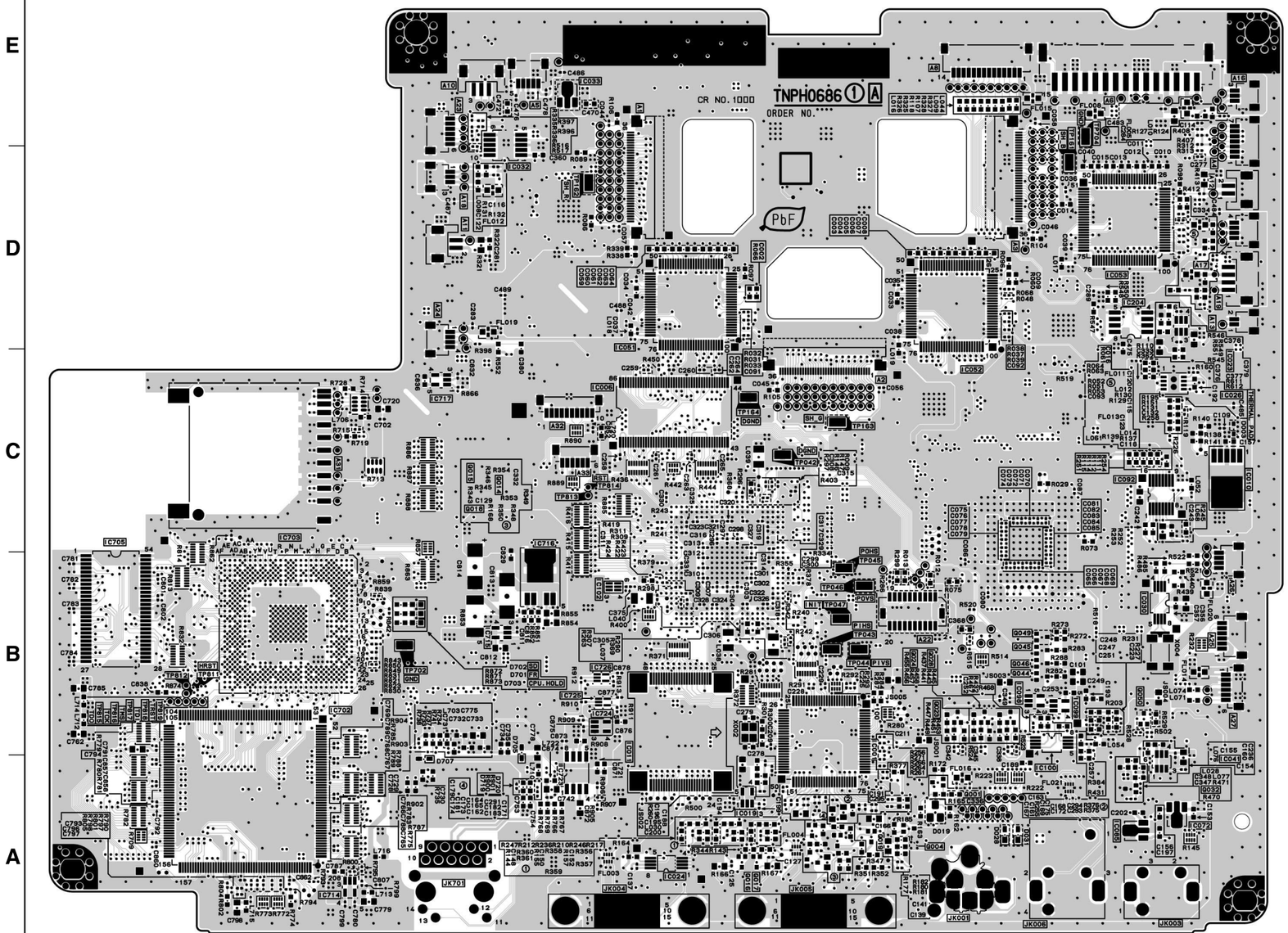
Only supplied components IC9602-03, Q9601-11, Q9614, D9601, D9604-09, D9611-12, D9616-29, R9601, R9630-34, R9636-40, R9653, C9603, C9610, C9615, C9618-19, S9602



13 Circuit Boards

13.1. A-P.C.Board (Foil Side)

A-P.C.Board (Foil Side) **TXANP01QEXZ (F100NTU)** **TXANP01QEYZ (F100U)** **TXANP01VKE2 (F100NTE/EA)** **TXANP01VKE3 (F100E/EA)**

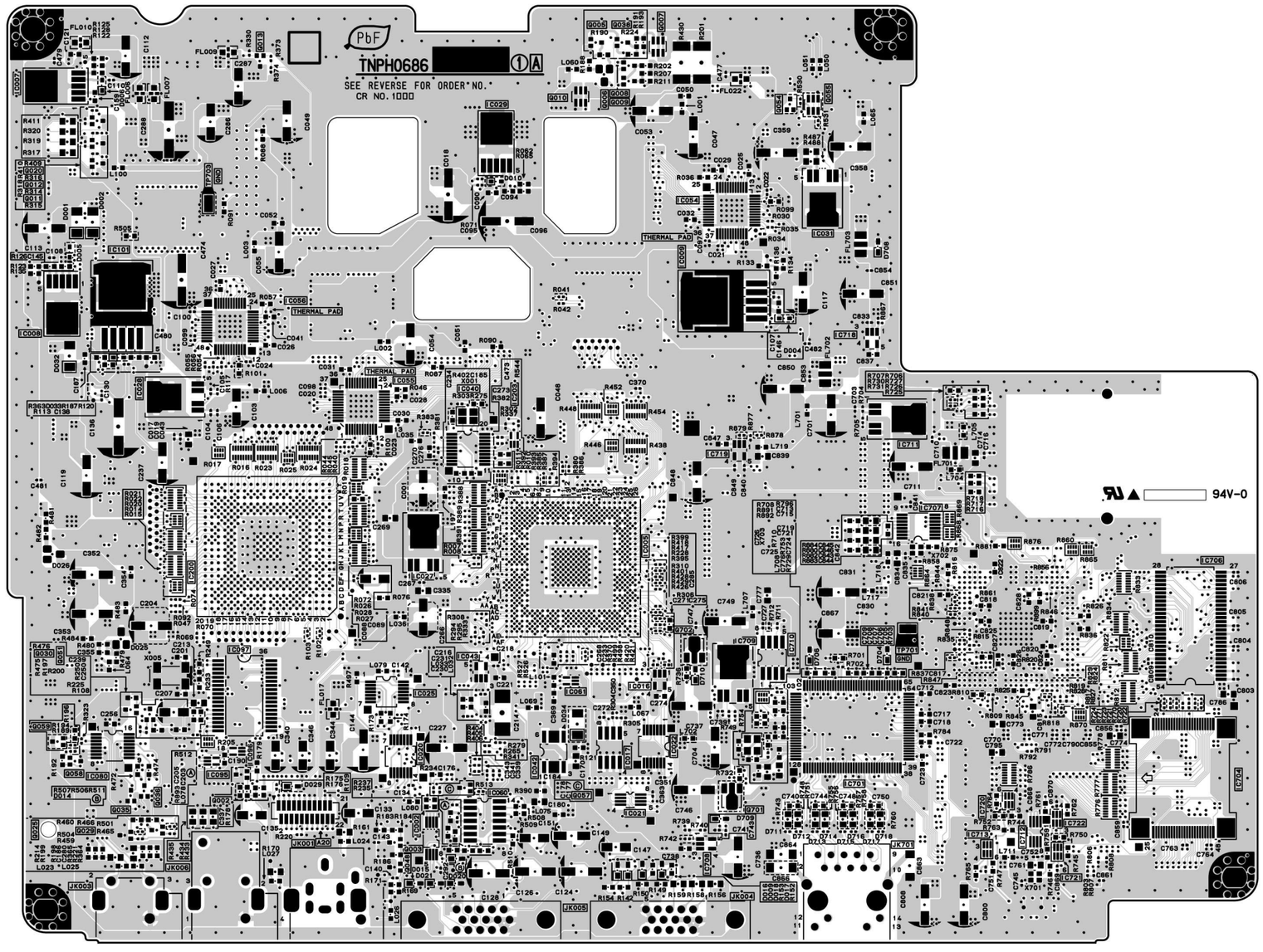


A-P.C.Board (Foil Side)					
IC					
IC1001	B-5	IC1052	D-5	IC1705	B-1
IC1006	C-4	IC1053	D-6	IC1714	A-2
IC1010	C-6	IC1072	A-6	IC1715	B-3
IC1011	B-4	IC1085	A-6	IC1716	B-3
IC1019	A-4	IC1092	C-6	IC1717	C-3
IC1023	D-6	IC1098	B-5	IC1723	A-3
IC1024	A-4	IC1099	B-6	IC1724	B-3
IC1026	C-6	IC1100	B-6	IC1725	B-3
IC1030	B-6	IC1102	B-3	IC1726	B-3
IC1032	D-3	IC1204	C-6		
IC1041	A-6	IC1702	A-2		
IC1051	D-4	IC1703	B-2		
TRANSISTOR					
Q1001	A-5	Q1018	C-3	Q1044	B-5
Q1004	A-5	Q1019	A-5	Q1045	B-5
Q1014	C-3	Q1023	B-5	Q1046	B-5
Q1015	C-3	Q1024	B-5		
Q1016	A-4	Q1028	B-5		
Q1017	A-4	Q1032	A-6		

ADDRESS INFORMATION

13.2. A-P.C.Board (Component Side)

A-P.C.Board (Component Side) **TXANP01QEXZ (F100NTU)** **TXANP01VKE2 (F100NTE/EA)**
TXANP01QEYZ (F100U) **TXANP01VKE3 (F100E/EA)**



A-P.C.Board (Component Side)					
IC					
IC1002	A-3	IC1040	C-3	IC1701	B-5
IC1005	B-3	IC1042	B-3	IC1704	A-6
IC1007	E-1	IC1043	B-3	IC1706	B-6
IC1008	D-1	IC1054	D-4	IC1707	C-5
IC1009	D-4	IC1055	C-2	IC1708	A-4
IC1016	B-4	IC1056	D-2	IC1709	B-4
IC1017	B-4	IC1060	A-3	IC1710	B-4
IC1020	B-3	IC1061	B-3	IC1711	C-5
IC1021	A-4	IC1080	B-1	IC1712	A-6
IC1022	B-4	IC1095	A-2	IC1713	A-5
IC1025	B-3	IC1096	B-2	IC1718	D-5
IC1027	C-3	IC1097	B-2	IC1719	C-4
IC1028	C-1	IC1101	D-1	IC1720	A-5
IC1029	E-3	IC1200	B-2	IC1721	A-6
IC1031	D-5	IC1203	C-3	IC1722	A-6
TRANSISTOR					
Q1002	A-2	Q1012	D-1	Q1048	A-3
Q1003	A-3	Q1013	E-2	Q1051	B-1
Q1005	E-4	Q1020	D-1	Q1057	A-3
Q1006	E-4	Q1025	A-1	Q1058	A-1
Q1007	E-4	Q1029	A-1		
Q1008	E-4	Q1030	B-1		
Q1009	E-4	Q1035	A-1		
Q1010	E-3	Q1036	A-1		
Q1011	D-1	Q1038	E-4		

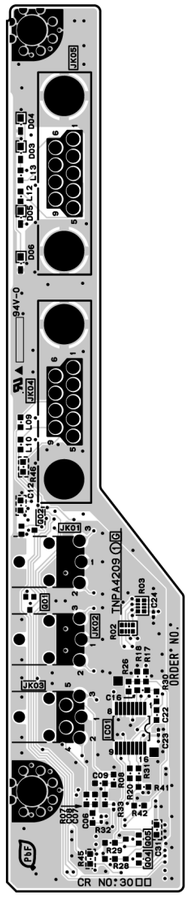
ADDRESS INFORMATION

13.3. G-P.C.Board

G-P.C.Board TNPA4209 (Foil Side)

G-P.C.Board (Foil Side)			
IC		TRANSISTOR	
IC3001	B-1	Q3001	C-1
		Q3002	C-1
		Q3004	B-1
		Q3005	B-1

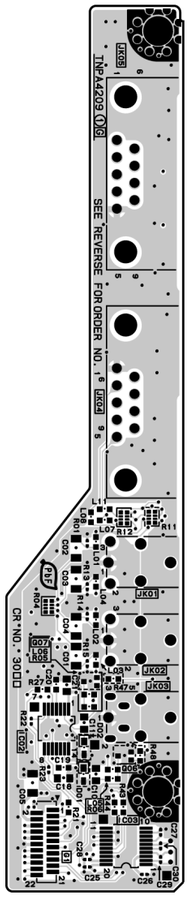
ADDRESS INFORMATION



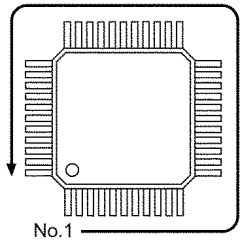
G-P.C.Board TNPA4209 (Component Side)

G-P.C.Board (Component Side)	
IC	
IC3002	B-4
IC3003	B-4

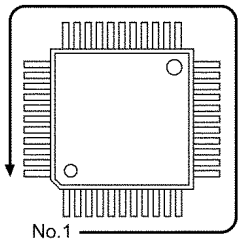
ADDRESS INFORMATION



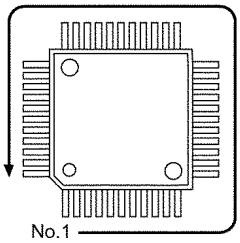
14 Terminal guide of ICs and transistors



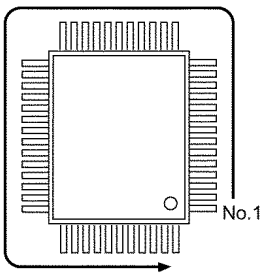
C1AB00002766 48 Pin



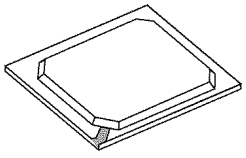
C1AB00002665 100 Pin



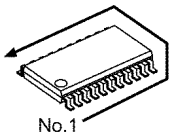
C1AB00002607 100 Pin
C1AB00001268 208 Pin



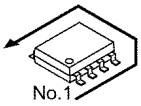
C1CB00002683 128 Pin



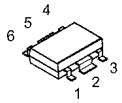
C1AB00002351
C1AB00002684
C2GBC0000205



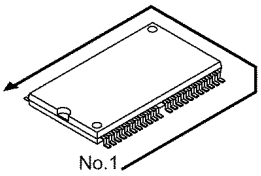
C3ABPJ000071	86 Pin
C0JBAZ002347	20 Pin
C0FBBK000066	16 Pin
C0GBY0000052	16 Pin
C0JBAA000315	14 Pin
C0ABZB000051	14 Pin
C0JBAZ001876	14 Pin
C0JBAZ002743	14 Pin
C0JBAR000282	16 Pin
C0JBAZ002857	20 Pin



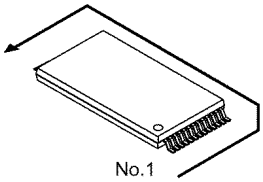
C3EBCD000024	8 Pin
C0JBAF000540	8 Pin
C3EBCC000052	8 Pin
C1AB00001145	8 Pin
C0GBG0000053	10 Pin



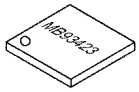
C0DBZGF00002 6 Pin



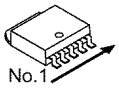
C3ABRG000072 54 Pin



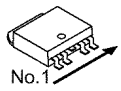
TVRP168 48 Pin



C1AB00002790

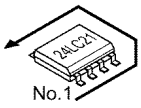


C0DBEKG00004 5 Pin

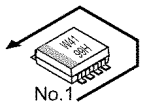


C0CBCAG00014	5 Pin
C0DBZFG00055	5 Pin
C0DBEKG00004	5 Pin
C0CBCBG00013	5 Pin
C0CBCYG00004	5 Pin

C0CBAHC00010	3 Pin
C0CBADC00075	3 Pin



C3EBJC000055 8 Pin

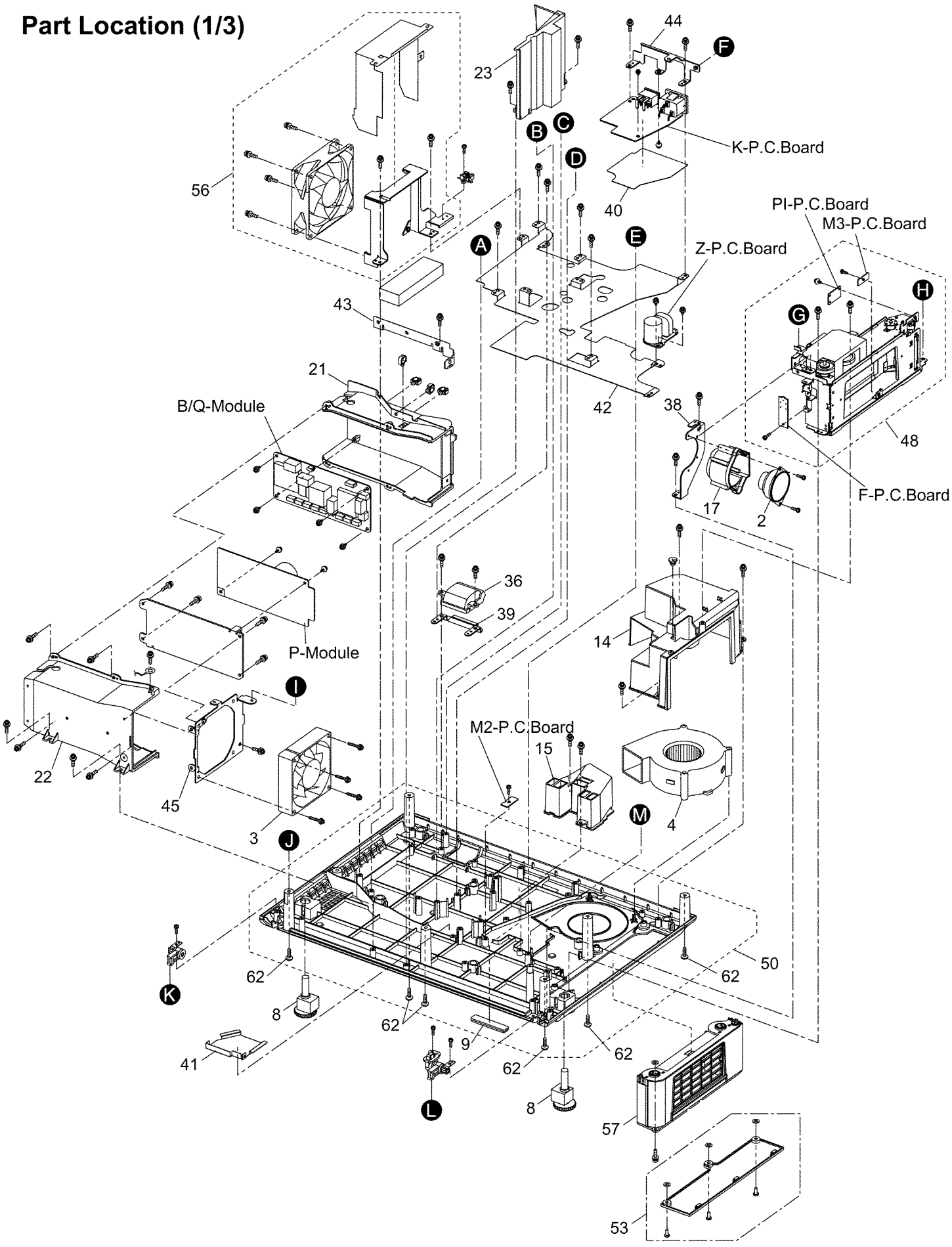


C0DBZHD00013	6 Pin
C0JBAA000340	8 Pin

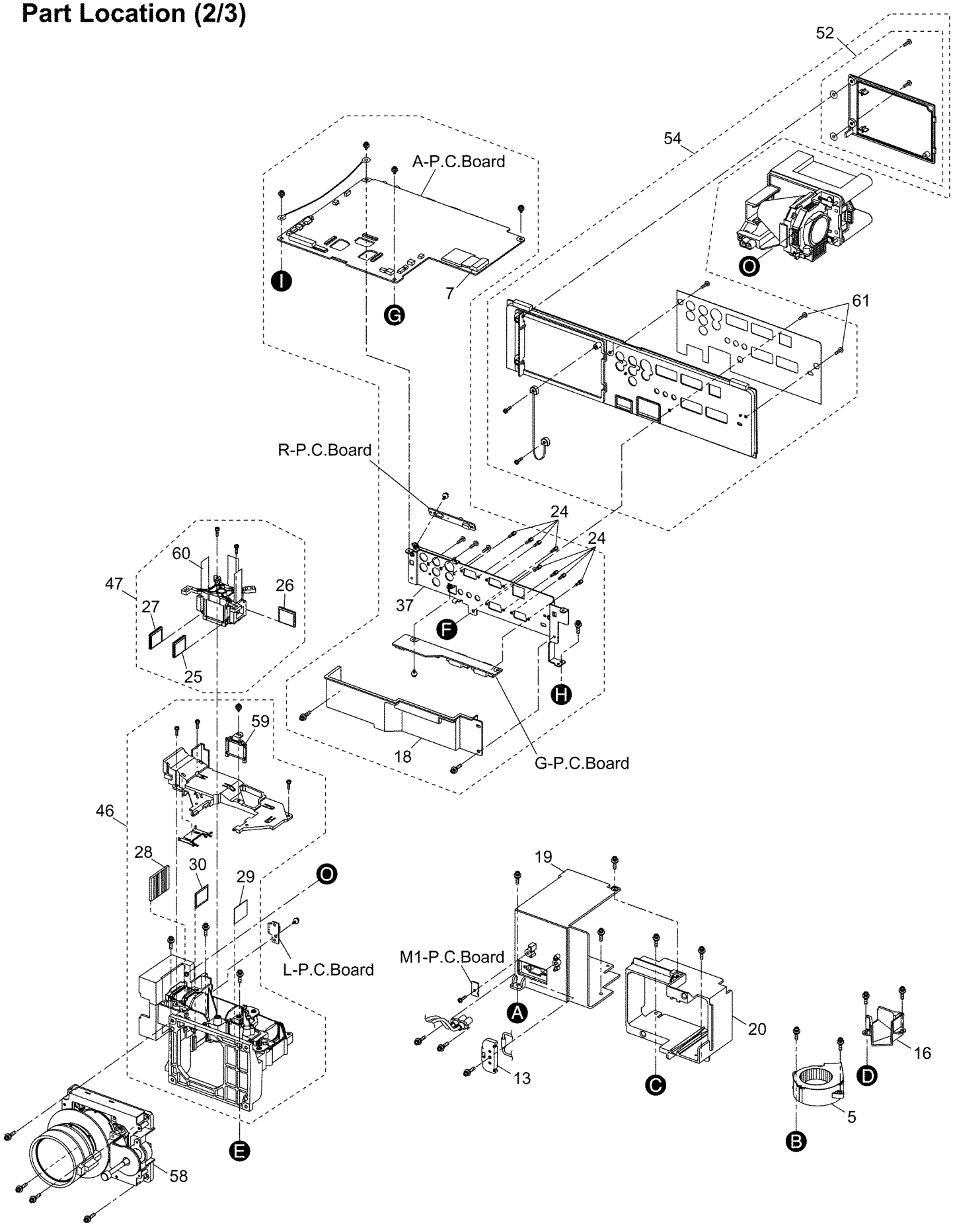
B1ABDF000018	3 Pin
B1GBCFJJ0007	3 Pin
B1GBCFLM0003	3 Pin
2SB0710AWL	3 Pin

15 Exploded Views

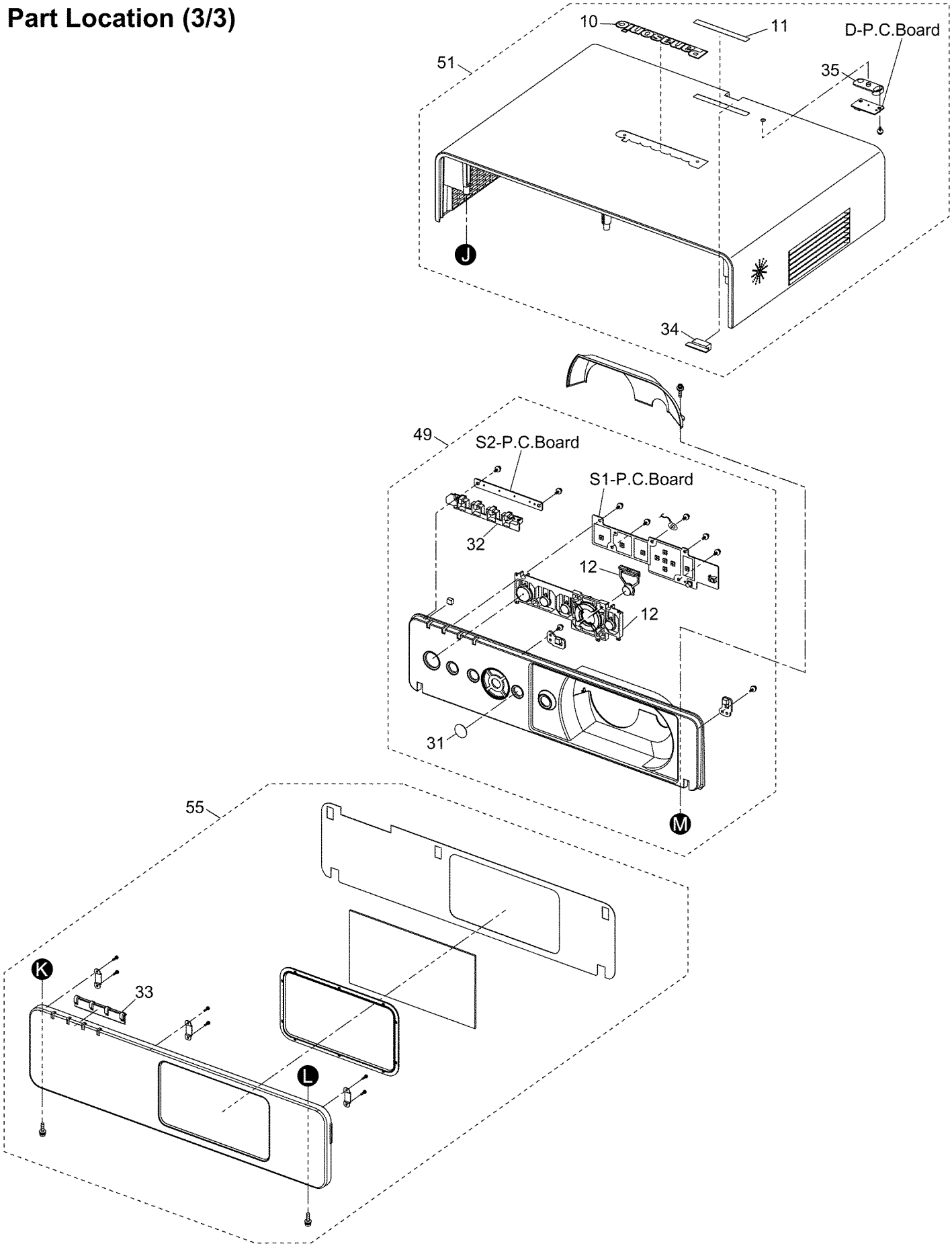
Part Location (1/3)



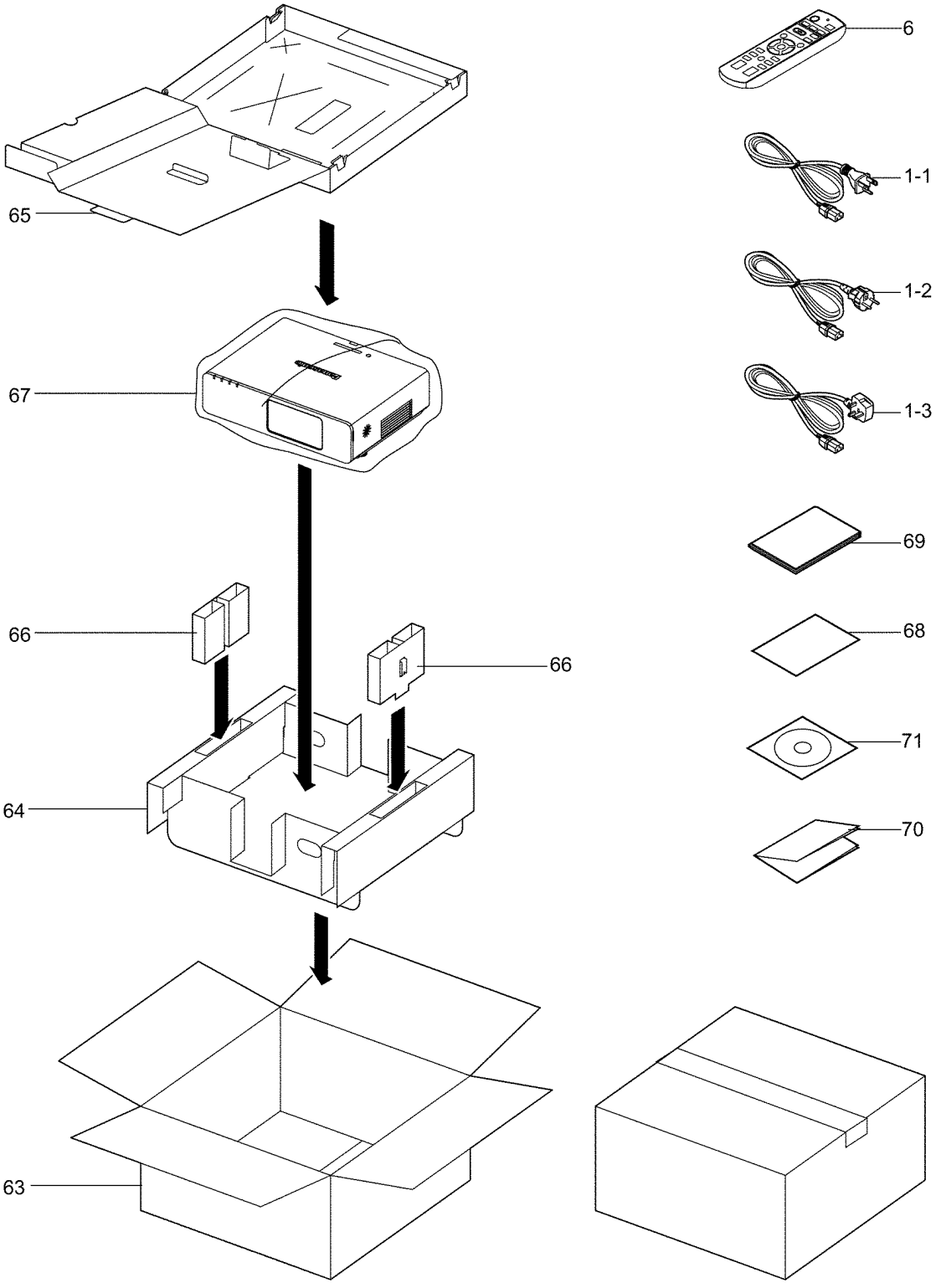
Part Location (2/3)



Part Location (3/3)



Packing Parts



16 Replacement Parts List

Important Safety Notice

Components identified by the International symbol ⚠ have special characteristics important for safety.
When replacing any of these components, use only the manufacturer's specified parts.

Abbreviation of part name and description

1. Resistor

Example:

ERD25TJ104 C 100KOHM, J, 1/4W

TYPE ALLOWANCE

TYPE	ALLOWANCE
C : Carbon	F : ± 1 %
F : Fuse	G : ± 2 %
M : Metal Oxide	J : ± 5 %
Metal Film	K : ±10%
S : Solid	M : ±20%
W : Wire Wound	

2. Capacitor

Example:

ECKF1H103ZF C 0.01PF, Z, 50V

TYPE ALLOWANCE

TYPE	ALLOWANCE
C : Ceramic	C : ±0.25 pF
E : Electrolytic	D : ±0.5 pF
P : Polyester	F : ± 1 pF
PP : Polypropylene	J : ± 5 %
S : Polystyrol	K : ±10 %
T : Tantalum	L : ±15 %
	M : ±20 %
	P : +100 %, -0 %
	Z : +80 %, -20 %

Notes:

Printed circuit board assembly with mark (RTL) is no longer available after production discontinuation of the complete set.

Ref. No.	Part No.	Part Name & Description	Remarks
		[MECHANICAL PARTS]	
	J0KG00000011	CLAMP CORE	⚠
	J0KG00000036	CORE	⚠
1-1	K2CG3DH00053	POWER CORD	⚠ F100NTU, F100U
1-2	K2CM3DH00015	POWER CORD(EUROPE)	⚠ F100NTE/EA, F100E/EA
1-3	K2CT3DH00029	POWER CORD(ASIA)	⚠ F100NTEA, F100EA
2	L0AA04A00036	SPEAKER	
3	L6FAYYYH0059	POWER FAN	⚠
4	L6FCYYYH0020	INHALATION FAN	⚠
5	L6FCYYYH0021	LAMP FAN	⚠
6	N2QAYB000152	REMOTE CONTROLLER	F100NTU/E/EA
	N2QAYB000154	REMOTE CONTROLLER	⚠ F100U/E/EA
7	N5HZZ0000042	LAN CARD(SDIOj	⚠ F100NTU/E/EA
8	TBLB0047	ADJUST LEG	
9	TBLG3042-1	RUBBER LEG (REAR)	
10	TBMA228	PANASONIC BADGE	
11	TBMA237	LOGO BADGE	F100NTU/E/EA
	TBMA238	LOGO BADGE	F100U/E/EA
	TBMG543	MODEL NAME PLATE	⚠ F100NTU
	TBMG544	MODEL NAME PLATE	⚠ F100NTE
	TBMG545	MODEL NAME PLATE	⚠ F100NTEA
	TBMG547	MODEL NAME PLATE	⚠ F100U
	TBMG548	MODEL NAME PLATE	⚠ F100E
	TBMG549	MODEL NAME PLATE	⚠ F100EA
12	TBXA52001	CONTROL BUTTON	
13	TEEC5120	TEMP FUSE INSTALL METAL	⚠
14	TEEC5317	INHALATION DUCT	⚠
15	TEEC5318	OPTICAL DUCT	⚠
16	TEEC5319	LAMP DUCT	⚠
17	TEEC5320	SPEAKER BOX	⚠
18	TEEC5321	PROTECTION DUST COVER	⚠
19	TEEC5322	LAMP HOUSE	⚠
20	TEEC5323	LAMP GUIDE	⚠
21	TEEC5326	POWER CASE (RIGHT)	⚠
22	TEEC5327	POWER CASE (LEFT)	⚠
23	TEEC5329	POWER SEPARATE PLATE	⚠

Ref. No.	Part No.	Part Name & Description	Remarks
	TEJC034	FRONT PANEL ARM R	
	TEJC035	FRONT PANEL ARM L	
	TEKC054	DAMPER	
	TESA299	FRONT PANEL SPRING	
	TEWF094	TAPE 2	F100NTU/E/EA
	TEWF100	SHIELD TAPE	
	TEWF104	SHIELD TAPE	
24	THEC084N	D-SUB SCREW	
	THEC101J	SCREW	
	THTA038J	SCREW	
25	TKGP0041	POLARIZING PLATE/OUT(R)	
26	TKGP0042	POLARIZING PLAETE/ OUT(G)	
27	TKGP0043	POLARIZING PLAETE/ OUT(B)	
28	TKGP5354	PBS	
29	TKGP5355	POLARIZING PLATE/IN(R)	
30	TKGP5357	POLARIZING PLATE/IN(B)	
31	TKKC5273	REMOTE RECEIVER PLATE	
32	TKKC5282	LED PLATE 1	
33	TKKC5283	LED PLATE 2	
34	TKKC5284	REMOTE RECEIVERPLATE (REAR)	
35	TKKC5285	DLV RECEIVER PLATE	
	TKKH5103	SHIELD COVER (MIDDLE)	⚠
36	TKKL5395	ANTITHEFT PLATE COVER	
37	TKZF5053	TERMINAL METAL	
38	TKZK5025	SPEAKER BOX INSTALL METAL	
39	TKZX5206	ANTITHEFT PLATE	
	TKZX5208	CEILING BOSS PLATE	
	TMKG389	FAN SPONGE	
	TMKG775	SPEAKER SPONGE	
	TMKG778	ARF SPONGE 3	
	TMKG783	ARF SPONGE 5	
	TMKG784	ARF SPONGE 6	
	TMKG798	SHEET 1	
	TMKG799	SHEET 2	
	TMKG800	SHEET 3	
	TMKG806	SPONGE 1	
	TMKG807	SPONGE 2	
	TMKG808	SPONGE 3	

Ref. No.	Part No.	Part Name & Description	Remarks
	TMKG809	SPONGE 4	
	TMKG811	INLET SPONGE	
	TMKG814	ARF SPONGE 7	
	TMKG815	ARF SPONGE 8	
	TMKG823	POWER SPONGE 6	
	TMKG825	ARF SPONGE 9	
	TMKG826	ARF SPONGE 10	
	TMKG827	ARF SPONGE 11	
	TMKG828	ARF SPONGE 12	
40	TMKY248	PCB-K SHIELD SHEET	⚠
	TMKY253	DECORATION PANEL TAPE	
41	TMKY278	LEAD WIRE COVER(K-PCB)	
	TMKY279	GEAR COVER	
	TMKY280	HINGE COVER	
	TMKY300	FLEX SHELTER SHEET	
	TMKY304	CLAMP SHEET	
	TMKY306	FAN COVER(BOTTOM)	
	TMKY315	MAGNET SHEET	
	TMME312	MINI CLAMP	
	TMME301	LEAD WIRE CLAMPER	
	TMME309	MINI CLAMP	
63	TPCC18901	CARTON	F100NTU
	TPCC18904	CARTON	⚠ F100NTE
	TPCC18907	CARTON	⚠ F100NTEA
	TPCC18902	CARTON	F100U
	TPCC18905	CARTON	F100E
	TPCC18908	CARTON	F100EA
64	TPDF1898	CUSHION PAD	
65	TPDF1899	ACCESSORY CARTON	
66	TPDF1964	CUSHION PAD 2	
67	TPEH110-1	SET COVER	⚠
	TQB817002-1	SAFETY SHEET	F100NTU, F100U
68	TQBH7017-1	SHEET (PASSWORD)	
69	TQBJ0213	INSTRUCTION BOOK	⚠ F100NTU, F100U
	TQBJ0214	INSTRUCTION BOOK	⚠ F100NTE, F100E
	TQBJ0215	INSTRUCTION BOOK	⚠ F100NTEA, F100EA
	TQBJ7008	HIGH GROUND SHEET	F100NTU, F100U
	TQD1712010	SHEET	
	TQDJ18004-1	GUARANTEE CARD(CANADA)	F100NTU, F100U
	TQDJ18028-1	GUARANTEE CARD(USA)	F100NTU, F100U
70	TQDJ19059	QUICK GUIDE(UK/SPAIN)	F100NTU
	TQDJ19060	QUICK GUIDE (GERMAN/ITALY)	F100NTE
	TQDJ19061	QUICK GUIDE (FRENCH/SPAIN)	F100NTE
	TQDJ19062	INSTALL GUIDE (ENGLISH/KOREA)	F100NTE/EA
	TSXL626	FLEX CABLE (A20-G1)	⚠
	TSXL627	FLEX CABLE (A8-S1)	⚠
	TSXL628	FLEX CABLE (S5-S6)	⚠
	TTRA0141	WIRE	⚠
	TUCB5091	ALUMINUM SHEET 1	
	TUCB5098	ALUMINUM SHEET 2	
	TUCB5099	ALUMINUM SHEET 3	
	TUCB5100	ALUMINUM SHEET 4	
	TUCB5101	ALUMINUM SHEET 5	
	TUCB5102	ALUMINUM SHEET 6	
	TUCB5103	ALUMINUM SHEET 7	
	TUCB5104	ALUMINUM SHEET 8	
	TUCB5105	ALUMINUM SHEET 9	
42	TUCX5230	BASE PLATE	
43	TUCX5231	POWER EARTH METAL	
44	TUWC065	AC INLET PLATE	
	TUWX154	DAMPER PLATE	
45	TUXL182	POWER FAN INSTALL METAL	
	TUXX462	MAGNET	
	TXAWC01VKD4	AC INLET ASSY	⚠
46	TXFEC98QEXZ	ANALYSIS BLOCK	⚠
47	TXFEC99QEXZA	OPTICAL BLOCK A	⚠
	TXFEC99QEXZB	OPTICAL BLOCK B	⚠

Ref. No.	Part No.	Part Name & Description	Remarks
	TXFEJ02QEXZ	OPERATING UNIT ASSY	
	TXFEJ04QEXZ	SUPPORT UINT ASSY	
	TXFEK01QEXZ	SIDE PLATE ASSY	
48	TXFEN01QEXZ	ARF ASSY	⚠
49	TXFKF02QEXZ	FRONT COVER ASSY	⚠
50	TXFKF98QEXZ	BOTTOM COVER	⚠ F100NTU
	TXFKF98QFAZ	BOTTOM COVER	⚠ F100NTE
	TXFKF98QFDZ	BOTTOM COVER	⚠ F100NTEA
	TXFKF98QEYZ	BOTTOM COVER	⚠ F100U
	TXFKF98QFBZ	BOTTOM COVER	⚠ F100E
	TXFKF98QFEZ	BOTTOM COVER	⚠ F100EA
51	TXFKF99QEXZ	UPPER COVER	⚠ F100NTU/E/EA
	TXFKF99QEYZ	UPPER COVER	⚠ F100U/E/EA
52	TXFKL99QEXZ	LAMP COVER ASSY	⚠
53	TXFKL02QEXZ	ARF COVER ASSY	⚠
54	TXFKP01QEXZ	TERMINAL COVER ASSY	⚠ F100NTU/E/EA
	TXFKP01QEYZ	TERMINAL COVER ASSY	⚠ F100U/E/EA
55	TXFKP02QEXZ	FRONT PANEL ASSY	⚠
56	TXFKZ01QEXZ	VENTILATION FAN ASSY	⚠
57	ET-RFF100	CARTRIDGE-A ASSY	
71	TXFQB02QEXZA	CD-ROM	⚠ F100NTU/E/EA
	TXJ/B1QEXZ	CABLE (B1-P2)	⚠
	TXJ/E1VKD3	EARTH LEAD	⚠
	TXJ/F1QEXZ	CABLE (F1-A23)	⚠
	TXJ/K1QEXZ	CABLE (K1-KP)	⚠
	TXJ/M1QEXZ	CABLE (M1-A12)	⚠
	TXJ/M2QEXZ	CABLE (M2-A11)	⚠
	TXJ/M3QEXZ	CABLE (M3-A13)	⚠
	TXJ/P1QEXZ	LEAD WIRE (PK-P1)	⚠
	TXJ/P3QEXZ	CABLE (P3-A6)	⚠
	TXJ/Q3QEXZ	CABLE (Q3-A4)	⚠
	TXJ/S1QEXZ	CABLE (S1-S2)	⚠
	TXJ/SWQEXZ	CABLE (P3-SW)	⚠
	TXJA26QEXZ	CABLE (L1-A26)	⚠
	TXJA27QEXZ	CABLE (DLP-A27)	⚠
	TXJPI1QEXZ	CABLE (PI1-A24)	⚠
58	TXZKG03QEXZ	LENS	
59	TXZKG04QEXZ	POLARIZING PLATE/IN(G)	
60	TZTEN01QEXZ	LIQUID CRYSTAL DISPLAY(B)	⚠
	TZTEN02QEXZ	LIQUID CRYSTAL DISPLAY(B)	⚠
	XQN2+C3FJK	SCREW	
	XSB3+6FN	SCREW	
61	XSB3+8FN	SCREW	
62	XTB3+10CFN	SCREW	
	XTB3+12GFJK	SCREW	
	XTBT969FJK	SCREW	
	XTN3+6GFJ	SCREW	
	XTW3+8PFJ	SCREW	
	XYC3+FJ8FJ	SCREW	
	XYN2+F6FJ	SCREW	
	XYN26+C6FJ	SCREW	
	XYN26+F6FJ	SCREW	
	XYN3+F10FJ	SCREW	
	XYN3+F30FJ	SCREW	
	XYN3+F6FJ	SCREW	
	XYN3+F8FJ	SCREW	
	XYN3+J10FJ	SCREW	
	XYN3+J6FJ	SCREW	
	XYN3+J8FJ	SCREW	
	XYN4+E8FJ	SCREW	
	XYN4+F25FJ	SCREW	
	XYN4+J10FJK	SCREW	
	XZB15X32C05	POLY BAG	
	XZBT6506	POLY BAG	
[INTEGRATED CIRCUIT]			
IC1001	C1AB00002665	I.C	

Ref. No.	Part No.	Part Name & Description	Remarks
IC1002	C3EBCC000052	I.C	
IC1005	C1AB00002684	I.C	
IC1006	C3ABPJ000071	I.C	
IC1007	C0DBEKG00004	I.C	
IC1008	C0DBEKG00004	I.C	
IC1009	C0DBEYY00042	I.C	
IC1010	C0DBEKG00004	I.C	
IC1011	TVRP167	I.C	
IC1016	C0EBE0000348	I.C	
IC1017	C3EBJC000055	I.C	
IC1019	C0CBCAC00096	I.C	
IC1020	C0JBAZ001876	I.C	
IC1021	C0JBAA000340	I.C	
IC1022	C0JBAA000315	I.C	
IC1024	C3EBCC000052	I.C	
IC1025	C0JBAZ002743	I.C	
IC1026	C1AB00002708	I.C	
IC1027	C0CBCAG00015	I.C	
IC1028	C0DBZFG00055	I.C	
IC1029	C0DBEKG00004	I.C	
IC1030	C1DB00001208	I.C	
IC1031	C0CBCYG00004	I.C	
IC1032	C0GBG0000053	I.C	
IC1040	C0ZBZ0001361	I.C	
IC1041	C0DBZHD00013	I.C	
IC1042	C0DBZGF00002	I.C	
IC1043	C0CBCAD00015	I.C	
IC1051	C1AB00002607	I.C	
IC1052	C1AB00002607	I.C	
IC1053	C1AB00002607	I.C	
IC1054	C1AB00002289	I.C	
IC1055	C1AB00002289	I.C	
IC1056	C1AB00002289	I.C	
IC1060	C0ABZB000051	I.C	
IC1061	C0JBAA000345	I.C	
IC1072	C0CBADC00075	I.C	
IC1080	C0JBAR000370	I.C	
IC1085	C0CBAHC00010	I.C	
IC1092	C0GBY0000052	I.C	
IC1093	C0DBEKG00004	I.C	
IC1095	C0JBAA000345	I.C	F100NTU, F100U
IC1096	C0JBAA000345	I.C	F100NTU, F100U
IC1097	C2BBYY000332	I.C	F100NTU, F100U
IC1098	C0JBAE000354	I.C	F100NTU, F100U
IC1099	C0JBAE000354	I.C	F100NTU, F100U
IC1100	C1AB00001145	I.C	F100NTU, F100U
IC1200	C1AB00002351	I.C	
IC1701	C1CB00002683	I.C	F100NTU/E/EA
IC1702	C1DB00001268	I.C	F100NTU/E/EA
IC1703	C2GBC0000205	I.C	F100NTU/E/EA
IC1704	TVRP168	I.C	F100NTU/E/EA
IC1705	C3ABRG000072	I.C	F100NTU/E/EA
IC1706	C3ABRG000072	I.C	F100NTU/E/EA
IC1707	C0FBBK000066	I.C	F100NTU/E/EA
IC1708	C0CBCAD00015	I.C	F100NTU/E/EA
IC1709	C0CBCAG00014	I.C	F100NTU/E/EA
IC1710	C3EBCD000024	I.C	F100NTU/E/EA
IC1711	C0CBCBG00013	I.C	F100NTU/E/EA
IC1712	C0JBAF000540	I.C	F100NTU/E/EA
IC1713	C0JBAZ002347	I.C	F100NTU/E/EA
IC1714	C0CBCAD00015	I.C	F100NTU/E/EA
IC1715	C0EBY0000242	I.C	F100NTU/E/EA
IC1716	C0DBEFG00003	I.C	F100NTU/E/EA
IC1717	C0EBG0000280	I.C	F100NTU/E/EA
IC1718	C0EBY0000022	I.C	F100NTU/E/EA
IC1719	C0CBCBD00008	I.C	F100NTU/E/EA
IC1720	C0JBAZ002347	I.C	F100NTU/E/EA
IC1721	C0JBAZ002347	I.C	F100NTU/E/EA
IC1722	C0JBAZ002347	I.C	F100NTU/E/EA
IC1723	C0DBZYY00269	I.C	F100NTU/E/EA
IC1724	C0EBY0000022	I.C	F100NTU/E/EA
IC1725	C0JBAZ001958	I.C	F100NTU/E/EA
IC1726	C0JBAZ001958	I.C	F100NTU/E/EA

Ref. No.	Part No.	Part Name & Description	Remarks
IC3001	C0JBAR000367	I.C	
IC3002	C1AB00002428	I.C	
IC3003	C0ZBZ0001361	I.C	
IC9602	C0ZBZ0001462	I.C	
IC9603	C0ZBZ0001462	I.C	
		[TRANSISTORS]	
Q1001	B1ABDF000018	TRANSISTOR	
Q1002	B1ABDF000018	TRANSISTOR	
Q1003	B1ABDF000018	TRANSISTOR	
Q1004	B1ABDF000018	TRANSISTOR	
Q1005	B1GBCFLM0003	TRANSISTOR	
Q1006	2SB0710AWL	TRANSISTOR	
Q1007	B1DFED000017	TRANSISTOR	
Q1008	B1GBCFLM0003	TRANSISTOR	
Q1009	B1GBCFLL0039	TRANSISTOR	
Q1010	B1CHQD000001	TRANSISTOR	
Q1011	B1ABDF000018	TRANSISTOR	
Q1012	B1ABDF000018	TRANSISTOR	
Q1013	B1ABDF000018	TRANSISTOR	
Q1014	B1GBCFJJ0007	TRANSISTOR	
Q1015	B1ADCE000013	TRANSISTOR	
Q1016	B1ABDF000018	TRANSISTOR	
Q1017	B1ABDF000018	TRANSISTOR	
Q1018	B1ABDF000018	TRANSISTOR	
Q1019	B1GDCFJJ0008	TRANSISTOR	
Q1020	B1ABDF000018	TRANSISTOR	
Q1023	B1ABDF000018	TRANSISTOR	
Q1024	B1ABDF000018	TRANSISTOR	
Q1025	B1ADCF000063	TRANSISTOR	
Q1028	B1ABDF000018	TRANSISTOR	
Q1029	B1ADCF000063	TRANSISTOR	
Q1030	B1ABDF000018	TRANSISTOR	F100NTU, F100U
Q1032	B1ADCF000063	TRANSISTOR	
Q1035	B1GBCFJJ0007	TRANSISTOR	
Q1036	B1GBCFJJ0007	TRANSISTOR	F100NTU, F100U
Q1038	B1GBCFJJ0007	TRANSISTOR	
Q1044	B1GBCFJJ0007	TRANSISTOR	F100NTU, F100U
Q1045	B1GBCFJJ0007	TRANSISTOR	F100NTU, F100U
Q1046	B1GBCFJJ0007	TRANSISTOR	F100NTU, F100U
Q1048	2SB1218A	TRANSISTOR	
Q1049	B1GBCFJJ0007	TRANSISTOR	
Q1051	B1ABDF000018	TRANSISTOR	F100NTU, F100U
Q1054	B1GBCFLM0003	TRANSISTOR	
Q1055	B1CHQD000001	TRANSISTOR	
Q3001	B1GBCFLM0003	TRANSISTOR	
Q3002	B1GBCFLM0003	TRANSISTOR	
Q3004	B1GBCFLM0003	TRANSISTOR	
Q3005	B1GBCFLM0003	TRANSISTOR	
Q9601	2SD1819A0L	TRANSISTOR	
Q9602	2SD1819A0L	TRANSISTOR	
Q9603	B1CERQ000038	TRANSISTOR	
Q9604	2SB0710AWL	TRANSISTOR	
Q9605	2SB0710AWL	TRANSISTOR	
Q9606	B1CERM000015	TRANSISTOR	
Q9607	B1CERM000015	TRANSISTOR	
Q9608	2SB0710AWL	TRANSISTOR	
Q9609	2SB0710AWL	TRANSISTOR	
Q9610	B1CERM000015	TRANSISTOR	
Q9611	B1CERM000015	TRANSISTOR	
Q9614	B1CERQ000038	TRANSISTOR	
		[DIODES]	
D1001	B0JCPD000026	DIODE	
D1002	B0JCPD000026	DIODE	
D1007	EZJZ0V171AA	VARISTOR	
D1009	MA8056M	DIODE	
D1014	MA8056M	DIODE	
D1015	MA8056M	DIODE	
D1016	MA8056M	DIODE	
D1017	MA8056M	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
D1018	MA8056M	DIODE	
D1020	MA8056M	DIODE	
D1021	MA8056M	DIODE	
D1024	MA152WK	DIODE	
D1025	MA152WK	DIODE	
D1026	MA152WK	DIODE	
D1701	LNJ308G8TRA	LED	F100NTU/E/EA
D1702	LNJ308G8TRA	LED	F100NTU/E/EA
D1703	LNJ208R8ARA	LED	F100NTU/E/EA
D1704	B0BC4R0A0006	DIODE	F100NTU/E/EA
D1705	B0BC4R0A0006	DIODE	F100NTU/E/EA
D1706	B0BC4R0A0006	DIODE	F100NTU/E/EA
D1707	B0BC4R0A0006	DIODE	F100NTU/E/EA
D1708	B0BC4R0A0006	DIODE	F100NTU/E/EA
D1709	B0JCGD000002	DIODE	F100NTU/E/EA
D1710	B0JCGD000002	DIODE	F100NTU/E/EA
D1711	EZJZ0V80010	DIODE	F100NTU/E/EA
D1712	EZJZ0V80010	DIODE	F100NTU/E/EA
D1713	EZJZ0V80010	DIODE	F100NTU/E/EA
D1714	EZJZ0V80010	DIODE	F100NTU/E/EA
D1715	EZJZ0V80010	DIODE	F100NTU/E/EA
D1716	EZJZ0V80010	DIODE	F100NTU/E/EA
D1717	EZJZ0V80010	DIODE	F100NTU/E/EA
D1718	EZJZ0V80010	DIODE	F100NTU/E/EA
D1719	EZJZ0V80010	DIODE	F100NTU/E/EA
D1720	EZJZ0V80010	DIODE	F100NTU/E/EA
D3003	MAZ81500ML	DIODE	
D3004	MAZ81500ML	DIODE	
D3005	MAZ81500ML	DIODE	
D3006	MAZ81500ML	DIODE	
D9101	ERZV10D471	VARISTOR	⚠
D9601	B0FABR000008	DIODE	
D9604	B0ACEM000012	DIODE	
D9605	B0JCPF000001	DIODE	
D9606	B0ACEM000012	DIODE	
D9607	B0JCPF000001	DIODE	
D9608	B0ACEM000012	DIODE	
D9609	B0JCPF000001	DIODE	
D9611	B0ACEM000012	DIODE	
D9612	B0JCPF000001	DIODE	
D9616	B0ECKP000047	DIODE	
D9617	B0JCPF000001	DIODE	
D9618	B0JCPF000001	DIODE	
D9619	B0JCPF000001	DIODE	
D9620	B0JCPF000001	DIODE	
D9621	B0JCPF000001	DIODE	
D9622	B0ECKP000047	DIODE	
D9623	B0ECKP000047	DIODE	
D9624	B0JCPF000001	DIODE	
D9625	B0JCPF000001	DIODE	
D9626	B0JCPF000001	DIODE	
D9627	B0JCPF000001	DIODE	
D9628	B0JCPF000001	DIODE	
D9629	B0ECKP000047	DIODE	
[COILS]			
L1001	J0JJC0000022	EMI FILTER	
L1002	J0JJC0000022	EMI FILTER	
L1003	J0JJC0000022	EMI FILTER	
L1006	J0JJC0000022	EMI FILTER	
L1008	J0JCC0000168	FILTER	
L1009	J0JJC0000022	EMI FILTER	
L1010	J0JCC0000168	FILTER	
L1012	J0JCC0000168	FILTER	
L1014	J0JCC0000168	FILTER	
L1016	J0JJC0000022	EMI FILTER	
L1017	J0JJC0000022	EMI FILTER	
L1018	J0JJC0000022	EMI FILTER	
L1019	J0JJC0000022	EMI FILTER	
L1022	J0JHC0000078	FILTER	
L1023	J0JCC0000168	FILTER	
L1024	J0JCC0000168	FILTER	

Ref. No.	Part No.	Part Name & Description	Remarks
L1025	J0JCC0000168	FILTER	
L1026	J0JCC0000168	FILTER	
L1027	J0JCC0000168	FILTER	
L1028	J0JCC0000168	FILTER	
L1030	J0JCC0000168	FILTER	
L1032	J0JCC0000168	FILTER	
L1033	J0JJC0000022	EMI FILTER	
L1035	J0JJC0000022	EMI FILTER	
L1036	J0JJC0000022	EMI FILTER	
L1037	ELJFA470JFB	COIL	
L1038	ELJFA470JFB	COIL	
L1039	ELJFA470JFB	COIL	
L1040	ELJFA470JFB	COIL	
L1044	J0JJC0000022	EMI FILTER	
L1050	J0JGC0000059	FILTER	
L1051	J0JGC0000059	FILTER	
L1052	J0JJC0000022	EMI FILTER	
L1054	J0JJC0000022	EMI FILTER	F100NTU, F100U
L1055	J0JGC0000059	FILTER	
L1056	J0JGC0000059	FILTER	
L1057	J0JJC0000022	EMI FILTER	
L1060	J0JJC0000022	EMI FILTER	
L1061	J0JJC0000022	EMI FILTER	
L1062	J0JCC0000168	FILTER	
L1064	J0JJC0000022	EMI FILTER	
L1067	J0JJC0000022	EMI FILTER	
L1068	J0JJC0000022	EMI FILTER	
L1069	J0JJC0000022	EMI FILTER	
L1071	J0JJC0000022	EMI FILTER	
L1074	J0JJC0000022	EMI FILTER	
L1075	J0JJC0000022	EMI FILTER	
L1076	J0JJC0000022	EMI FILTER	
L1077	J0JJC0000022	EMI FILTER	
L1078	J0JJC0000022	EMI FILTER	
L1079	J0JJC0000022	EMI FILTER	
L1080	J0JJC0000022	EMI FILTER	
L1197	ERJ3GEY0R00	M 0 OHM, 1/16W	
L1701	J0JHC0000107	FILTER	F100NTU/E/EA
L1703	J0JHC0000107	FILTER	F100NTU/E/EA
L1706	J0JHC0000107	FILTER	F100NTU/E/EA
L1707	J0JHC0000107	FILTER	F100NTU/E/EA
L1708	ERJ3GEY0R00	M 0 OHM, 1/16W	F100NTU/E/EA
L1710	ERJ3GEY0R00	M 0 OHM, 1/16W	F100NTU/E/EA
L1711	J0JHC0000107	FILTER	F100NTU/E/EA
L1712	J0JHC0000107	FILTER	F100NTU/E/EA
L1713	J0JHC0000107	FILTER	F100NTU/E/EA
L1714	J0JHC0000107	FILTER	F100NTU/E/EA
L1715	ERJ3GEY0R00	M 0 OHM, 1/16W	F100NTU/E/EA
L1716	J0JHC0000107	FILTER	F100NTU/E/EA
L1717	J0JHC0000107	FILTER	F100NTU/E/EA
L1718	J0JHC0000107	FILTER	F100NTU/E/EA
L1719	J0JHC0000107	FILTER	F100NTU/E/EA
L1721	J0JHC0000107	FILTER	F100NTU/E/EA
L1722	J0JHC0000107	FILTER	F100NTU/E/EA
L3001	J0JCC0000168	FILTER	
L3002	J0JCC0000168	FILTER	
L3003	J0JCC0000168	FILTER	
L3004	J0JCC0000168	FILTER	
L3005	J0JCC0000168	FILTER	
L3006	J0JCC0000168	FILTER	
L3007	J0JCC0000168	FILTER	
L3008	J0JCC0000168	FILTER	
L3009	J0JCC0000168	FILTER	
L3010	J0JCC0000168	FILTER	
L3011	J0JCC0000168	FILTER	
L3012	J0JCC0000168	FILTER	
L3013	J0JCC0000168	FILTER	
L9101	EXCELDR35C	CORE	
L9102	EXCELDR35C	CORE	
LF9101	G0B692J00001	FILTER	⚠
FL1001	J0HAYY000012	FILTER	
FL1002	J0HAYY000012	FILTER	
FL1003	J0HAYY000046	FILTER	

Ref. No.	Part No.	Part Name & Description	Remarks
FL1004	J0HAYY000046	FILTER	
FL1005	J0HAYY000012	FILTER	
FL1006	J0HAYY000012	FILTER	
FL1007	J0HAYY000012	FILTER	
FL1008	J0HAYY000012	FILTER	
FL1009	J0HAYY000012	FILTER	
FL1010	J0HAYY000012	FILTER	
FL1011	J0HAYY000012	FILTER	
FL1012	J0HAYY000012	FILTER	
FL1013	J0HAYY000012	FILTER	
FL1014	J0HAYY000012	FILTER	
FL1015	J0HAYY000012	FILTER	
FL1016	J0HAYY000012	FILTER	
FL1017	J0HAYY000012	FILTER	
FL1018	J0HAYY000012	FILTER	
FL1019	J0HAYY000012	FILTER	
FL1020	J0HAYY000012	FILTER	
FL1021	J0HAYY000046	FILTER	
FL1701	ELKE103FA	EMI FILTER	F100NTU/E/EA
FL1702	ELKE103FA	EMI FILTER	F100NTU/E/EA
FL1703	ELKE103FA	EMI FILTER	F100NTU/E/EA
[RESISTORS]			
R1007	ERJ2GEJ560	M 56 OHM, 0.063W	
R1008	ERJ2GEJ560	M 56 OHM, 0.063W	
R1009	ERJ2GEJ560	M 56 OHM, 0.063W	
R1010	ERJ2GEJ560	M 56 OHM, 0.063W	
R1011	EXB28V560J	RESISTOR ARRAY	
R1014	EXB2HV470JV	RESISTOR ARRAY	
R1015	EXB28V470JX	RESISTOR ARRAY	
R1016	EXB2HV470JV	RESISTOR ARRAY	
R1017	EXB28V470JX	RESISTOR ARRAY	
R1018	EXB2HV470JV	RESISTOR ARRAY	
R1019	EXB28V470JX	RESISTOR ARRAY	
R1020	EXB2HV560JV	RESISTOR ARRAY	
R1021	EXB2HV560JV	RESISTOR ARRAY	
R1022	EXB28V560J	RESISTOR ARRAY	
R1023	EXB2HV560JV	RESISTOR ARRAY	
R1024	EXB2HV560JV	RESISTOR ARRAY	
R1025	EXB28V560J	RESISTOR ARRAY	
R1026	EXB2HV560JV	RESISTOR ARRAY	
R1027	EXB2HV560JV	RESISTOR ARRAY	
R1028	EXB28V560J	RESISTOR ARRAY	
R1029	ERJ3GEYJ470	M 47 OHM,J,1/16W	
R1030	ERJ2GEJ220	M 22 OHM, 0.063W	
R1031	ERJ2GEJ220	M 22 OHM, 0.063W	
R1032	ERJ2GEJ220	M 22 OHM, 0.063W	
R1033	ERJ2GEJ220	M 22 OHM, 0.063W	
R1034	ERJ2GEJ220	M 22 OHM, 0.063W	
R1035	ERJ2GEJ220	M 22 OHM, 0.063W	
R1036	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1037	ERJ2GEJ220	M 22 OHM, 0.063W	
R1038	ERJ2GEJ220	M 22 OHM, 0.063W	
R1039	ERJ2GEJ220	M 22 OHM, 0.063W	
R1040	ERJ2GEJ220	M 22 OHM, 0.063W	
R1042	ERJ2GE0R00	M 0 OHM, 0.063W	
R1043	ERJ3EKF3302	M 33KOHM, 1/16W	
R1044	ERJ2GEJ220	M 22 OHM, 0.063W	
R1045	ERJ2GEJ220	M 22 OHM, 0.063W	
R1046	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1047	ERJ2GE0R00	M 0 OHM, 0.063W	
R1051	ERJ2GEJ220	M 22 OHM, 0.063W	
R1052	ERJ2GEJ220	M 22 OHM, 0.063W	
R1053	ERJ2GEJ220	M 22 OHM, 0.063W	
R1054	ERJ2GEJ220	M 22 OHM, 0.063W	
R1055	ERJ2GEJ220	M 22 OHM, 0.063W	
R1056	ERJ2GEJ220	M 22 OHM, 0.063W	
R1057	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1060	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1061	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1062	ERJ3EKF1002	M 10KOHM, 1/16W	
R1064	ERJ2GE0R00	M 0 OHM, 0.063W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1065	ERJ3EKF1473	M 147KOHM, 0.063W	
R1066	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1068	ERJ2GE0R00	M 0 OHM, 0.063W	
R1069	ERJ2GEJ220	M 22 OHM, 0.063W	
R1070	ERJ2GEJ220	M 22 OHM, 0.063W	
R1071	ERJ2GEJ220	M 22 OHM, 0.063W	
R1072	ERJ3GEYJ470	M 47 OHM,J,1/16W	
R1073	ERJ3GEYJ470	M 47 OHM,J,1/16W	
R1074	ERJ2GE0R00	M 0 OHM, 0.063W	
R1076	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1079	ERJ3GEYJ105	M 1M OHM,J,1/16W	
R1080	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1086	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1087	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1088	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1089	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1090	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1091	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1092	ERJ2GEJ470	RESISTOR	
R1096	ERJ3GEYJ100	M 10 OHM,J,1/16W	
R1097	ERJ3GEYJ100	M 10 OHM,J,1/16W	
R1098	ERJ3GEYJ100	M 10 OHM,J,1/16W	
R1104	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1105	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1106	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1107	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1108	ERJ2GEJ104	M 100KOHM, 0.063W	F100NTU, F100U
R1109	ERJ2GEJ103	M 10K OHM, 0.063W	
R1110	ERJ2GEJ473	M 47K OHM, 0.063W	
R1116	ERJ2GE0R00	M 0 OHM, 0.063W	
R1117	ERJ2GEJ220	M 22 OHM, 0.063W	
R1118	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1122	ERJ3EKF1003	RESISTOR	
R1123	ERJ3EKF3302	M 33KOHM, 1/16W	
R1124	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1125	ERJ3EKF3302	M 33KOHM, 1/16W	
R1126	ERJ3EKF1003	RESISTOR	
R1127	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1128	ERJ3EKF1002	M 10KOHM, 1/16W	
R1129	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1130	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1131	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1132	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1133	ERJ3EKF1002	M 10KOHM, 1/16W	
R1134	ERJ3EKF3302	M 33KOHM, 1/16W	
R1135	ERJ3EKF1002	M 10KOHM, 1/16W	
R1136	ERJ3EKF1003	RESISTOR	
R1137	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1138	ERJ3EKF1002	M 10KOHM, 1/16W	
R1139	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1140	ERJ3EKF1003	RESISTOR	
R1141	ERJ3EKF3302	M 33KOHM, 1/16W	
R1142	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1143	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R1145	EXB28V473JX	RESISTOR ARRAY	
R1146	ERJ2GE0R00	M 0 OHM, 0.063W	
R1149	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1150	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1151	ERJ3GEYJ203	RESISTOR	
R1152	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1153	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1154	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1156	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1158	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1159	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1160	ERJ2GEJ100	M 10 OHM, 0.063W	
R1161	ERJ6GEYJ750	M 75 OHM,J,1/10W	
R1162	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1163	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1164	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1165	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1166	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1167	ERJ6ENF75R0	M 75 OHM, 1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1168	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1169	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1170	ERJ6GEYJ750	M 75 OHM,J,1/10W	
R1171	ERJ3GEYJ104	M 100KOHM,J,1/16W	
R1172	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1173	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1174	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1175	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1176	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1177	ERJ6GEYJ750	M 75 OHM,J,1/10W	
R1178	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1179	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1180	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1181	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1182	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R1183	ERJ3GEYJ682	M 6.8KOHM,J,1/16W	
R1184	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	
R1185	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1186	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1188	ERJ3GEYJ223	M 22K OHM,J,1/16W	
R1189	ERJ2GE0R00	M 0 OHM, 0.063W	
R1190	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1191	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1193	ERJ3GEYJ393	M 39K OHM,J,1/16W	
R1195	ERJ3GEYJ393	M 39K OHM,J,1/16W	
R1196	ERJ3GEYJ203	RESISTOR	
R1197	ERJ2GEJ101	M 100 OHM, 0.063W	F100NTU, F100U
R1198	ERJ3GEYJ124	M 120KOHM,J,1/16W	
R1199	ERJ3GEYJ154	M 150 OHM,J,1/16W	
R1200	ERJ3GEYJ471	M 470 OHM,J,1/16W	F100NTU, F100U
R1201	ERJ1TYJ221	M 220 OHM, 1W	
R1202	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1203	ERJ3GEYJ473	M 47K OHM,J,1/16W	F100NTU, F100U
R1205	EXB28V220J	RESISTOR ARRAY	F100NTU, F100U
R1207	ERJ3GEYJ223	M 22K OHM,J,1/16W	
R1210	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1211	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1212	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1214	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1217	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1220	ERJ2GEJ220	M 22 OHM, 0.063W	
R1221	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1222	EXB28V220J	RESISTOR ARRAY	
R1223	EXB28V220J	RESISTOR ARRAY	
R1224	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1225	ERJ3GEYJ105	M 1M OHM,J,1/16W	F100NTU, F100U
R1226	ERJ2GEJ153	RESISTOR	
R1231	ERJ3GEYJ471	M 470 OHM,J,1/16W	F100NTU, F100U
R1232	EXB28V220J	RESISTOR ARRAY	F100NTU, F100U
R1233	ERJ3GEYJ394	RESISTOR	F100NTU, F100U
R1234	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1235	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1236	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1237	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1238	ERJ2GEJ100	M 10 OHM, 0.063W	
R1239	ERJ3GEYJ393	M 39K OHM,J,1/16W	
R1240	ERJ2GEJ220	M 22 OHM, 0.063W	
R1241	ERJ2GEJ220	M 22 OHM, 0.063W	
R1242	ERJ2GEJ220	M 22 OHM, 0.063W	
R1243	ERJ2GEJ220	M 22 OHM, 0.063W	
R1246	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1247	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1250	ERJ3GEYJ101	M 100 OHM,J,1/16W	F100NTU, F100U
R1251	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1252	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1253	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1254	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1255	ERJ3EKF1371	M 1.37KOHM,0.063W	
R1256	ERJ2GEJ220	M 22 OHM, 0.063W	
R1257	ERJ2GE0R00	M 0 OHM, 0.063W	
R1258	ERJ3GEYJ153	M 15K OHM,J,1/16W	
R1260	ERJ3EKF1691	M1.69KOHM, 1/16W	
R1261	ERJ2GE0R00	M 0 OHM, 0.063W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1263	ERJ3EKF1004	RESISTOR	
R1264	ERJ2GEJ220	M 22 OHM, 0.063W	
R1265	ERJ2GEJ560	M 56 OHM, 0.063W	
R1266	ERJ2GEJ220	M 22 OHM, 0.063W	
R1268	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1269	ERJ3EKF1003	RESISTOR	
R1270	ERJ3EKF1002	M 10KOHM, 1/16W	
R1271	ERJ2GEJ220	M 22 OHM, 0.063W	
R1272	ERJ3GEYJ103	M 10K OHM,J,1/16W	F100NTU, F100U
R1275	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1279	ERJ2GEJ330	M 33 OHM, 0.063W	
R1280	EXB28V560J	RESISTOR ARRAY	
R1281	EXB2HV560JV	RESISTOR ARRAY	
R1282	ERJ3GEYJ103	M 10K OHM,J,1/16W	F100NTU, F100U
R1283	ERJ3GEYJ103	M 10K OHM,J,1/16W	F100NTU, F100U
R1284	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1287	ERJ3GEYJ330	M 33 OHM,J,1/16W	
R1288	ERJ3GEYJ103	M 10K OHM,J,1/16W	F100NTU, F100U
R1290	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1291	EXB2HV560JV	RESISTOR ARRAY	
R1292	EXB28V560J	RESISTOR ARRAY	
R1293	ERJ2GEJ220	M 22 OHM, 0.063W	
R1294	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1295	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1296	ERJ2GEJ681	M 680 OHM, 0.063W	
R1300	ERJ3GEYJ105	M 1M OHM,J,1/16W	
R1301	ERJ3GEYJ561	M 560 OHM,J,1/16W	
R1302	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1303	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1304	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1305	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1306	ERJ2GEJ103	M 10K OHM, 0.063W	
R1307	ERJ3EKF1004	RESISTOR	
R1308	ERJ2GEJ103	M 10K OHM, 0.063W	
R1309	ERJ2GEJ105	M 1M OHM, 0.063W	
R1310	ERJ2GEJ105	M 1M OHM, 0.063W	
R1311	ERJ2GEJ105	M 1M OHM, 0.063W	
R1312	ERJ2GEJ103	M 10K OHM, 0.063W	
R1313	ERJ2GEJ101	M 100 OHM, 0.063W	
R1314	ERJ2GEJ103	M 10K OHM, 0.063W	
R1315	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1316	ERJ2GEJ103	M 10K OHM, 0.063W	
R1317	ERJ6GEYJ100	M 10 OHM,J,1/10W	
R1318	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1319	ERJ6GEYJ100	M 10 OHM,J,1/10W	
R1320	ERJ6GEYJ560	M 56 OHM,J,1/10W	
R1321	ERJ6ENF6801	M 6.8KOHM, 1/10W	
R1322	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R1323	ERJ12NF3300	RESISTOR	
R1324	ERJ3EKF6803	RESISTOR	
R1325	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1326	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1327	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1328	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1330	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1333	ERJ2GEJ104	M 100KOHM, 0.063W	
R1334	ERJ2GEJ104	M 100KOHM, 0.063W	
R1335	ERJ2GEJ104	M 100KOHM, 0.063W	
R1336	ERJ2GEJ104	M 100KOHM, 0.063W	
R1337	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1338	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1339	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1340	ERJ3EKF1503	RESISTOR	
R1341	ERJ2GEJ560	M 56 OHM, 0.063W	
R1343	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R1344	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R1345	ERJ3GEYJ274	M 270 OHM,J,1/16W	
R1346	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1347	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1348	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1349	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1350	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1351	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	

Ref. No.	Part No.	Part Name & Description	Remarks
R1352	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1353	ERJ3GEYJ331	M 330 OHM,J,1/16W	
R1354	ERJ3GEYJ222	M 2.2KOHM,J,1/16W	
R1355	ERJ2GEJ681	M 680 OHM, 0.063W	
R1356	ERJ3GEYJ153	M 15K OHM,J,1/16W	
R1357	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1358	ERJ3GEYJ153	M 15K OHM,J,1/16W	
R1359	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1360	ERJ3GEYJ153	M 15K OHM,J,1/16W	
R1361	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1362	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1363	ERJ3GEYJ473	M 47K OHM,J,1/16W	
R1364	ERJ3GEYJ124	M 120KOHM,J,1/16W	
R1365	ERJ3GEYJ154	M 150 OHM,J,1/16W	
R1368	ERJ2GEJ560	M 56 OHM, 0.063W	
R1369	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1370	ERJ2GEJ103	M 10K OHM, 0.063W	
R1371	EXB2HV103JV	RESISTOR ARRAY	
R1372	EXB2HV103JV	RESISTOR ARRAY	
R1373	ERJ2GEJ103	M 10K OHM, 0.063W	
R1374	ERJ2GEJ102	M 1K OHM, 0.063W	
R1375	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1376	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1377	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R1378	ERJ2GEJ220	M 22 OHM, 0.063W	
R1379	ERJ2GEJ681	M 680 OHM, 0.063W	
R1381	ERJ2GE0R00	M 0 OHM, 0.063W	
R1382	ERJ2GE0R00	M 0 OHM, 0.063W	
R1384	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	F100NTU, F100U
R1386	ERJ2GE0R00	M 0 OHM, 0.063W	
R1387	ERJ2GE0R00	M 0 OHM, 0.063W	
R1388	EXB2HV560JV	RESISTOR ARRAY	
R1389	EXB2HV560JV	RESISTOR ARRAY	
R1390	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1391	EXB2HV560JV	RESISTOR ARRAY	
R1392	ERJ2GEJ681	M 680 OHM, 0.063W	
R1393	ERJ2GE0R00	M 0 OHM, 0.063W	
R1394	ERJ2GE0R00	M 0 OHM, 0.063W	
R1395	ERJ2GE0R00	M 0 OHM, 0.063W	
R1396	ERJ2GEJ220	M 22 OHM, 0.063W	
R1397	ERJ2GEJ220	M 22 OHM, 0.063W	
R1398	ERJ2GEJ220	M 22 OHM, 0.063W	
R1399	ERJ2GEJ220	M 22 OHM, 0.063W	F100NTU/E/EA
R1400	EXB28V103J	RESISTOR ARRAY	
R1402	ERJ2GE0R00	M 0 OHM, 0.063W	
R1404	ERJ2GEJ101	M 100 OHM, 0.063W	
R1405	ERJ2GEJ101	M 100 OHM, 0.063W	
R1406	ERJ2GEJ101	M 100 OHM, 0.063W	
R1407	ERJ2GEJ103	M 10K OHM, 0.063W	
R1408	ERJ2GEJ101	M 100 OHM, 0.063W	
R1409	ERJ2GEJ103	M 10K OHM, 0.063W	
R1410	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1411	ERJ6GEYJ100	M 10 OHM,J,1/10W	
R1412	ERJ2GEJ102	M 1K OHM, 0.063W	
R1413	ERJ6ENF6801	M 6.8KOHM, 1/10W	
R1414	EXB2HV220J	RESISTOR ARRAY	F100U/E
R1415	EXB2HV220J	RESISTOR ARRAY	F100U/E
R1416	EXB2HV220J	RESISTOR ARRAY	F100U/E
R1417	ERJ2GE0R00	M 0 OHM, 0.063W	F100U/E
R1418	ERJ2GE0R00	M 0 OHM, 0.063W	F100U/E
R1421	ERJ2GE0R00	M 0 OHM, 0.063W	
R1423	ERJ2GE0R00	M 0 OHM, 0.063W	
R1424	ERJ2GE0R00	M 0 OHM, 0.063W	
R1425	ERJ2GE0R00	M 0 OHM, 0.063W	
R1427	ERJ2GE0R00	M 0 OHM, 0.063W	
R1429	ERJ2GE0R00	M 0 OHM, 0.063W	
R1430	ERJ1TYJ221	M 220 OHM, 1W	
R1431	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	F100NTU, F100U
R1432	ERJ3GEYJ152	M 1.5KOHM,J,1/16W	F100NTU, F100U
R1433	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1434	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1435	ERJ6ENF75R0	M 75 OHM, 1/10W	
R1436	EXB2HV220JV	RESISTOR ARRAY	

Ref. No.	Part No.	Part Name & Description	Remarks
R1437	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1438	EXB2HV220JV	RESISTOR ARRAY	
R1439	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1440	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1441	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1442	EXB28V220J	RESISTOR ARRAY	
R1443	ERJ3GEYJ221	M 220 OHM,J,1/16W	
R1444	EXB2HV220JV	RESISTOR ARRAY	
R1445	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1446	EXB28V220J	RESISTOR ARRAY	
R1447	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1448	EXB2HV220JV	RESISTOR ARRAY	
R1449	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1450	ERJ2GEJ220	M 22 OHM, 0.063W	
R1451	ERJ3GEYJ221	M 220 OHM,J,1/16W	
R1452	EXB28V220J	RESISTOR ARRAY	
R1453	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1454	EXB2HV220JV	RESISTOR ARRAY	
R1455	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	
R1456	ERJ3GEYJ562	M 5.6KOHM,J,1/16W	
R1457	ERJ3GEYJ221	M 220 OHM,J,1/16W	
R1458	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1459	ERJ2GEJ101	M 100 OHM, 0.063W	
R1460	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1465	ERJ2GEJ101	M 100 OHM, 0.063W	
R1466	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1467	ERJ3GEYJ122	M 1.2KOHM,J,1/16W	F100NTU, F100U
R1468	ERJ3GEYJ180	METAL OXIDE RESISTOR	F100NTU, F100U
R1470	ERJ2GEJ101	M 100 OHM, 0.063W	
R1471	ERJ3GEYJ471	M 470 OHM,J,1/16W	
R1472	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1474	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1475	ERJ2GEJ101	M 100 OHM, 0.063W	F100NTU, F100U
R1476	ERJ3GEYJ471	M 470 OHM,J,1/16W	F100NTU, F100U
R1479	ERJ3GEYJ221	M 220 OHM,J,1/16W	
R1480	ERJ3GEYJ561	M 560 OHM,J,1/16W	
R1481	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1482	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1483	ERJ3GEYJ184	M 180KOHM,J,1/16W	
R1484	ERJ3GEYJ105	M 1M OHM,J,1/16W	
R1485	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1486	ERJ3GEYJ220	M 22 OHM,J,1/16W	
R1489	ERJ2GE0R00	M 0 OHM, 0.063W	
R1490	ERJ2GE0R00	M 0 OHM, 0.063W	
R1491	ERJ2GE0R00	M 0 OHM, 0.063W	
R1492	ERJ2GE0R00	M 0 OHM, 0.063W	
R1493	ERJ2GE0R00	M 0 OHM, 0.063W	
R1494	ERJ2GE0R00	M 0 OHM, 0.063W	
R1495	ERJ2GE0R00	M 0 OHM, 0.063W	
R1497	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R1498	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1499	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1500	ERJ2GEJ472	M 4.7KOHM, 0.063W	
R1502	ERJ2GE0R00	M 0 OHM, 0.063W	
R1506	ERJ3GEYJ561	M 560 OHM,J,1/16W	
R1507	ERJ3GEYJ561	M 560 OHM,J,1/16W	
R1508	ERJ3GEYJ561	M 560 OHM,J,1/16W	
R1509	ERJ3GEYJ561	M 560 OHM,J,1/16W	
R1510	ERJ3GEYJ561	M 560 OHM,J,1/16W	
R1511	ERJ3GEYJ561	M 560 OHM,J,1/16W	
R1512	ERJ2GE0R00	M 0 OHM, 0.063W	
R1514	EXB28V103J	RESISTOR ARRAY	
R1518	ERJ2GEJ473	M 47K OHM, 0.063W	
R1519	ERJ2GEJ473	M 47K OHM, 0.063W	
R1520	ERJ2GEJ103	M 10K OHM, 0.063W	
R1521	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1522	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R1526	ERJ2GE0R00	M 0 OHM, 0.063W	
R1527	ERJ2GE0R00	M 0 OHM, 0.063W	
R1530	ERJ2GEJ562	M 5.6KOHM, 0.063W	
R1531	ERJ2GEJ220	M 22 OHM, 0.063W	
R1610	ERJ3GEY0R00	M 0 OHM, 1/16W	
R1702	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA

Ref. No.	Part No.	Part Name & Description	Remarks
R1704	ERJ2GEJ223	RESISTOR	F100NTU/E/EA
R1705	ERJ2GEJ101	M 100 OHM, 0.063W	F100NTU/E/EA
R1706	ERJ3GEY0R00	M 0 OHM, 1/16W	F100NTU/E/EA
R1708	EXB28V560J	RESISTOR ARRAY	F100NTU/E/EA
R1709	EXB28VR000	RESISTOR ARRAY	F100NTU/E/EA
R1711	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1713	EXB38V103J	RESISTOR ARRAY	F100NTU/E/EA
R1714	EXB38V103J	RESISTOR ARRAY	F100NTU/E/EA
R1716	ERJ3GEYJ220	M 22 OHM,J,1/16W	F100NTU/E/EA
R1717	ERJ3GEYJ220	M 22 OHM,J,1/16W	F100NTU/E/EA
R1718	ERJ3GEYJ220	M 22 OHM,J,1/16W	F100NTU/E/EA
R1719	ERJ3GEYJ220	M 22 OHM,J,1/16W	F100NTU/E/EA
R1720	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1721	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1725	ERJ3GEYJ220	M 22 OHM,J,1/16W	F100NTU/E/EA
R1726	ERJ3GEYJ220	M 22 OHM,J,1/16W	F100NTU/E/EA
R1727	ERJ3GEYJ220	M 22 OHM,J,1/16W	F100NTU/E/EA
R1728	ERJ3GEYJ220	M 22 OHM,J,1/16W	F100NTU/E/EA
R1729	ERJ6ENF2491	M2.49KOHM, 1/10W	F100NTU/E/EA
R1733	ERJ3GEYJ103	M 10K OHM,J,1/16W	F100NTU/E/EA
R1735	ERJ3GEYJ102	M 1K OHM,J,1/16W	F100NTU/E/EA
R1737	ERJ3GEYJ103	M 10K OHM,J,1/16W	F100NTU/E/EA
R1738	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1739	ERJ2GEJ101	M 100 OHM, 0.063W	F100NTU/E/EA
R1740	ERJ2GEJ223	RESISTOR	F100NTU/E/EA
R1741	ERJ3GEYJ102	M 1K OHM,J,1/16W	F100NTU/E/EA
R1744	ERJ3GEY0R00	M 0 OHM, 1/16W	F100NTU/E/EA
R1745	ERJ3GEY0R00	M 0 OHM, 1/16W	F100NTU/E/EA
R1746	ERJ3GEYJ560	M 56 OHM,J,1/16W	F100NTU/E/EA
R1747	ERJ3GEYJ680	M 68 OHM,J,1/16W	F100NTU/E/EA
R1749	ERJ2GEJ223	RESISTOR	F100NTU/E/EA
R1753	ERJ2GEJ330	M 33 OHM, 0.063W	F100NTU/E/EA
R1754	ERJ2GEJ101	M 100 OHM, 0.063W	F100NTU/E/EA
R1759	ERJ3GEYJ330	M 33 OHM,J,1/16W	F100NTU/E/EA
R1761	ERJ3GEYJ560	M 56 OHM,J,1/16W	F100NTU/E/EA
R1762	ERJ3GEYJ560	M 56 OHM,J,1/16W	F100NTU/E/EA
R1763	ERJ3GEYJ680	M 68 OHM,J,1/16W	F100NTU/E/EA
R1764	ERJ3GEYJ680	M 68 OHM,J,1/16W	F100NTU/E/EA
R1765	ERJ3GEYJ680	M 68 OHM,J,1/16W	F100NTU/E/EA
R1766	ERJ3GEYJ511	M 510 OHM,J,1/16W	F100NTU/E/EA
R1767	ERJ3GEY0R00	M 0 OHM, 1/16W	F100NTU/E/EA
R1768	ERJ3GEY0R00	M 0 OHM, 1/16W	F100NTU/E/EA
R1769	ERJ3GEYJ511	M 510 OHM,J,1/16W	F100NTU/E/EA
R1770	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1771	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1772	EXB28V103J	RESISTOR ARRAY	F100NTU/E/EA
R1773	EXB28V103J	RESISTOR ARRAY	F100NTU/E/EA
R1774	ERJ3GEYJ102	M 1K OHM,J,1/16W	F100NTU/E/EA
R1775	EXB2HV560JV	RESISTOR ARRAY	F100NTU/E/EA
R1776	EXB2HVR000V	RESISTOR ARRAY	F100NTU/E/EA
R1777	EXB2HVR000V	RESISTOR ARRAY	F100NTU/E/EA
R1778	EXB2HVR000V	RESISTOR ARRAY	F100NTU/E/EA
R1779	EXB2HVR000V	RESISTOR ARRAY	F100NTU/E/EA
R1780	EXB2HVR000V	RESISTOR ARRAY	F100NTU/E/EA
R1781	EXB2HVR000V	RESISTOR ARRAY	F100NTU/E/EA
R1782	EXB2HVR000V	RESISTOR ARRAY	F100NTU/E/EA
R1783	EXB2HV560JV	RESISTOR ARRAY	F100NTU/E/EA
R1784	ERJ3GEYJ680	M 68 OHM,J,1/16W	F100NTU/E/EA
R1785	EXB2HV560JV	RESISTOR ARRAY	F100NTU/E/EA
R1786	EXB2HV560JV	RESISTOR ARRAY	F100NTU/E/EA
R1787	ERJ2GEJ560	M 56 OHM, 0.063W	F100NTU/E/EA
R1788	EXB2HV103JV	RESISTOR ARRAY	F100NTU/E/EA
R1789	EXB2HV560JV	RESISTOR ARRAY	F100NTU/E/EA
R1790	ERJ2GEJ560	M 56 OHM, 0.063W	F100NTU/E/EA
R1791	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1792	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1793	ERJ2GEJ560	M 56 OHM, 0.063W	F100NTU/E/EA
R1794	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1796	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1797	ERJ2GEJ560	M 56 OHM, 0.063W	F100NTU/E/EA
R1798	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1799	ERJ2GEJ102	M 1K OHM, 0.063W	F100NTU/E/EA
R1801	ERJ2GEJ560	M 56 OHM, 0.063W	F100NTU/E/EA

Ref. No.	Part No.	Part Name & Description	Remarks
R1802	ERJ3GEYJ102	M 1K OHM,J,1/16W	F100NTU/E/EA
R1803	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1804	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1805	ERJ2GEJ220	M 22 OHM, 0.063W	F100NTU/E/EA
R1806	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1807	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1808	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1809	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1811	EXB2HV100JV	RESISTOR ARRAY	F100NTU/E/EA
R1812	EXB2HV100JV	RESISTOR ARRAY	F100NTU/E/EA
R1813	EXB2HV100JV	RESISTOR ARRAY	F100NTU/E/EA
R1814	EXB2HV100JV	RESISTOR ARRAY	F100NTU/E/EA
R1815	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1816	ERJ3GEYJ102	M 1K OHM,J,1/16W	F100NTU/E/EA
R1817	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1818	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1819	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1820	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1821	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1822	EXB28V100J	RESISTOR ARRAY	F100NTU/E/EA
R1824	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1825	ERJ3GEYJ102	M 1K OHM,J,1/16W	F100NTU/E/EA
R1826	ERJ3GEYJ100	M 10 OHM,J,1/16W	F100NTU/E/EA
R1829	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1830	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1831	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1832	EXB2HV220JV	RESISTOR ARRAY	F100NTU/E/EA
R1833	EXB2HV220JV	RESISTOR ARRAY	F100NTU/E/EA
R1834	EXB2HV220JV	RESISTOR ARRAY	F100NTU/E/EA
R1836	ERJ3GEYJ102	M 1K OHM,J,1/16W	F100NTU/E/EA
R1842	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1843	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1844	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1845	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1846	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1847	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1848	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1849	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1850	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1851	ERJ3GEYJ221	M 220 OHM,J,1/16W	F100NTU/E/EA
R1853	ERJ1TYJ1R0	RESISTOR	F100NTU/E/EA
R1854	ERJ6ENF4020	M 402 OHM, 1/10W	F100NTU/E/EA
R1855	ERJ6ENF1001	M 1KOHM, 1/10W	F100NTU/E/EA
R1856	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1857	EXB28V220J	RESISTOR ARRAY	F100NTU/E/EA
R1858	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1859	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1860	EXB28V103J	RESISTOR ARRAY	F100NTU/E/EA
R1861	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1862	ERJ2GE0R00	M 0 OHM, 0.063W	F100NTU/E/EA
R1863	EXB2HV220JV	RESISTOR ARRAY	F100NTU/E/EA
R1864	EXB28V104J	RESISTOR ARRAY	F100NTU/E/EA
R1865	EXB28V472J	RESISTOR ARRAY	F100NTU/E/EA
R1866	ERJ2GEJ103	M 10K OHM, 0.063W	F100NTU/E/EA
R1867	ERJ2GEJ223	RESISTOR	F100NTU/E/EA
R1868	EXB28V220J	RESISTOR ARRAY	F100NTU/E/EA
R1869	EXB28V103J	RESISTOR ARRAY	F100NTU/E/EA
R1870	EXB28V103J	RESISTOR ARRAY	F100NTU/E/EA
R1871	ERJ3GEYJ391	M 390 OHM,J,1/16W	F100NTU/E/EA
R1872	ERJ3GEYJ391	M 390 OHM,J,1/16W	F100NTU/E/EA
R1873	ERJ3GEYJ391	M 390 OHM,J,1/16W	F100NTU/E/EA
R1874	ERJ2GEJ680	RESISTOR	F100NTU/E/EA
R1875	ERJ3GEYJ220	M 22 OHM,J,1/16W	F100NTU/E/EA
R1876	EXB28V103J	RESISTOR ARRAY	F100NTU/E/EA
R1877	ERJ2GEJ102	M 1K OHM, 0.063W	F100NTU/E/EA
R1880	ERJ3GEYJ473	M 47K OHM,J,1/16W	F100NTU/E/EA
R1881	ERJ3GEYJ220	M 22 OHM,J,1/16W	F100NTU/E/EA
R1882	ERJ3GEYJ473	M 47K OHM,J,1/16W	F100NTU/E/EA
R1883	ERJ3GEYJ220	M 22 OHM,J,1/16W	F100NTU/E/EA
R1884	ERJ3GEYJ220	M 22 OHM,J,1/16W	F100NTU/E/EA
R1885	EXB2HV220JV	RESISTOR ARRAY	F100NTU/E/EA
R1886	EXB2HV220JV	RESISTOR ARRAY	F100NTU/E/EA
R1887	EXB2HV220JV	RESISTOR ARRAY	F100NTU/E/EA

Ref. No.	Part No.	Part Name & Description	Remarks
R1888	EXB2HV220JV	RESISTOR ARRAY	F100NTU/E/EA
R1889	EXB28V220J	RESISTOR ARRAY	F100NTU/E/EA
R1890	EXB28V220J	RESISTOR ARRAY	F100NTU/E/EA
R1899	ERJ3GEYJ102	M 1K OHM,J,1/16W	F100NTU/E/EA
R1902	ERJ2GEJ560	M 56 OHM, 0.063W	F100NTU/E/EA
R1903	ERJ2GEJ560	M 56 OHM, 0.063W	F100NTU/E/EA
R1904	ERJ2GEJ560	M 56 OHM, 0.063W	F100NTU/E/EA
R1905	ERJ2GEJ101	M 100 OHM, 0.063W	F100NTU/E/EA
R1906	ERJ2GEJ223	RESISTOR	F100NTU/E/EA
R1908	ERJ3GEY0R00	M 0 OHM, 1/16W	F100NTU/E/EA
R1909	ERJ2GEJ223	RESISTOR	F100NTU/E/EA
R1910	ERJ2GEJ101	M 100 OHM, 0.063W	F100NTU/E/EA
R1911	ERJ2GEJ560	M 56 OHM, 0.063W	F100NTU/E/EA
R1912	ERJ2GEJ101	M 100 OHM, 0.063W	F100NTU/E/EA
R1913	ERJ2GEJ560	M 56 OHM, 0.063W	F100NTU/E/EA
R3001	ERJ2GEJ473	M 47K OHM, 0.063W	
R3002	EXB28V102J	RESISTOR ARRAY	
R3003	EXB28V124JX	RESISTOR ARRAY	
R3004	EXB28V154JX	RESISTOR ARRAY	
R3005	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R3006	ERJ3GEYJ180	METAL OXIDE RESISTOR	
R3007	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R3008	ERJ3GEYJ560	M 56 OHM,J,1/16W	
R3009	ERJ3GEY0R00	M 0 OHM, 1/16W	
R3010	ERJ3GEY0R00	M 0 OHM, 1/16W	
R3011	EXB28V223JX	RESISTOR ARRAY	
R3012	EXB28V223JX	RESISTOR ARRAY	
R3013	ERJ2GEJ473	M 47K OHM, 0.063W	
R3014	ERJ2GEJ473	M 47K OHM, 0.063W	
R3015	ERJ2GEJ473	M 47K OHM, 0.063W	
R3017	ERJ3GEYJ563	M 56KOHM,J,1/16W	
R3018	ERJ3GEYJ154	M 150 OHM,J,1/16W	
R3020	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R3021	ERJ3GEYJ102	M 1K OHM,J,1/16W	
R3022	ERJ2GEJ220	M 22 OHM, 0.063W	
R3023	ERJ2GEJ220	M 22 OHM, 0.063W	
R3026	ERJ3GEYJ333	M 33K OHM,J,1/16W	
R3027	ERJ3GEYJ183	M 18K OHM,J,1/16W	
R3028	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R3029	ERJ3GEYJ103	M 10K OHM,J,1/16W	
R3030	ERJ3GEYJ183	M 18K OHM,J,1/16W	
R3031	ERJ3GEYJ333	M 33K OHM,J,1/16W	
R3032	ERJ2GEJ220	M 22 OHM, 0.063W	
R3033	ERJ2GEJ220	M 22 OHM, 0.063W	
R3041	ERJ3GEYJ563	M 56KOHM,J,1/16W	
R3042	ERJ3GEYJ154	M 150 OHM,J,1/16W	
R3043	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R3044	ERJ3GEYJ101	M 100 OHM,J,1/16W	
R9101	ERDS1TJ474	C 4.7KOHM, J,1/2W	⚠
R9601	ERX2SJR47E	M 0.47OHM,J, 2W	
R9630	ERJ14YJ3R3	M 3.3 OHM, J,1/4W	
R9631	ERJ8GEYJ220	M 68 OHM, J,1/4W	
R9632	ERJ14YJ5R6	M 5.6 OHM, J,1/4W	
R9633	ERJ8GEYJ100	M 10 OHM, J,1/4W	
R9634	ERJ8GEYJ120	RESISTOR	
R9636	ERJ14YJ3R3	M 3.3 OHM, J,1/4W	
R9637	ERJ8GEYJ220	M 68 OHM, J,1/4W	
R9638	ERJ14YJ5R6	M 5.6 OHM, J,1/4W	
R9639	ERJ8GEYJ100	M 10 OHM, J,1/4W	
R9640	ERJ8GEYJ120	RESISTOR	
R9653	D0XGR10KA001	RESISTOR	
[CAPACITORS]			
C1002	ECJ1VF1E105Z	CAPACITOR	
C1003	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1004	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1005	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1006	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1007	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1008	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1009	ECJ1VF1E105Z	CAPACITOR	
C1010	ECJ1VF1E104Z	C 0.1UF, Z, 25V	

Ref. No.	Part No.	Part Name & Description	Remarks
C1011	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1012	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1013	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1014	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1015	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1016	ECJ1VF1E105Z	CAPACITOR	
C1017	ECJ0EF1C104Z	C 0.1UF, 16V	
C1018	EEEFK1E101P	CAPACITOR	
C1019	ECJ0EB1H102K	C 1000PF, 50V	
C1020	ECJ0EF1C104Z	C 0.1UF, 16V	
C1021	ECJ0EF1C104Z	C 0.1UF, 16V	
C1022	ECJ0EF1C104Z	C 0.1UF, 16V	
C1023	ECJ0EF1C104Z	C 0.1UF, 16V	
C1024	ECJ0EF1C104Z	C 0.1UF, 16V	
C1025	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1026	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1027	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1028	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1029	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1030	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1031	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1032	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1033	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1034	ECJ0EB1H102K	C 1000PF, 50V	
C1035	ECJ0EB1H102K	C 1000PF, 50V	
C1036	ECJ0EB1H102K	C 1000PF, 50V	
C1037	ECJ0EF1C104Z	C 0.1UF, 16V	
C1038	ECJ0EF1C104Z	C 0.1UF, 16V	
C1039	ECJ0EF1C104Z	C 0.1UF, 16V	
C1040	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1041	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1042	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1043	ECJ2FF1A106Z	C 10UF, 10V	
C1044	ECJ0EF1C104Z	C 0.1UF, 16V	
C1045	ECJ0EF1C104Z	C 0.1UF, 16V	
C1046	ECJ0EF1C104Z	C 0.1UF, 16V	
C1047	F2G1E3300010	CAPACITOR	
C1048	F2G1E3300010	CAPACITOR	
C1049	F2G1E3300010	CAPACITOR	
C1050	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1051	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1052	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1053	F2G1E3300010	CAPACITOR	
C1054	F2G1E3300010	CAPACITOR	
C1055	F2G1E3300010	CAPACITOR	
C1056	ECJ0EF1C104Z	C 0.1UF, 16V	
C1057	ECJ0EF1C104Z	C 0.1UF, 16V	
C1058	ECJ0EF1C104Z	C 0.1UF, 16V	
C1059	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1060	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1061	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1062	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1063	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1064	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1065	ECJ0EF1C104Z	C 0.1UF, 16V	
C1066	ECJ0EF1C104Z	C 0.1UF, 16V	
C1067	ECJ0EF1C104Z	C 0.1UF, 16V	
C1068	ECJ0EF1C104Z	C 0.1UF, 16V	
C1069	ECJ0EF1C104Z	C 0.1UF, 16V	
C1070	ECJ0EF1C104Z	C 0.1UF, 16V	
C1071	ECJ0EF1C104Z	C 0.1UF, 16V	
C1072	ECJ0EF1C104Z	C 0.1UF, 16V	
C1073	ECJ0EF1C104Z	C 0.1UF, 16V	
C1074	ECJ0EF1C104Z	C 0.1UF, 16V	
C1075	ECJ0EF1C104Z	C 0.1UF, 16V	
C1076	ECJ0EF1C104Z	C 0.1UF, 16V	
C1077	ECJ0EF1C104Z	C 0.1UF, 16V	
C1078	ECJ0EF1C104Z	C 0.1UF, 16V	
C1079	ECJ0EF1C104Z	C 0.1UF, 16V	
C1080	ECJ0EF1C104Z	C 0.1UF, 16V	
C1081	ECJ0EF1C104Z	C 0.1UF, 16V	
C1082	ECJ0EF1C104Z	C 0.1UF, 16V	
C1083	ECJ0EF1C104Z	C 0.1UF, 16V	

Ref. No.	Part No.	Part Name & Description	Remarks
C1084	ECJ0EF1C104Z	C 0.1UF, 16V	
C1085	ECJ0EF1C104Z	C 0.1UF, 16V	
C1086	ECJ0EF1C104Z	C 0.1UF, 16V	
C1087	ECJ0EF1C104Z	C 0.1UF, 16V	
C1088	ECJ0EF1C104Z	C 0.1UF, 16V	
C1089	F2G0J3300014	CAPACITOR	
C1090	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1091	ECJ0EF1C104Z	C 0.1UF, 16V	
C1092	ECJ0EF1C104Z	C 0.1UF, 16V	
C1093	ECJ0EF1C104Z	C 0.1UF, 16V	
C1094	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1095	ECJ0EF1C104Z	C 0.1UF, 16V	
C1096	EEEFK1E101P	CAPACITOR	
C1097	ECJ0EF1C104Z	C 0.1UF, 16V	
C1098	ECJ0EF1C104Z	C 0.1UF, 16V	
C1099	ECJ0EF1C104Z	C 0.1UF, 16V	
C1100	ECJ0EF1C104Z	C 0.1UF, 16V	
C1101	ECJ2FF1A106Z	C 10UF, 10V	F100NTU, F100U
C1102	ECJ0EF1C104Z	C 0.1UF, 16V	
C1103	EEEHB0G101R	E 100UF, 4V	
C1104	ECJ0EF1C104Z	C 0.1UF, 16V	
C1105	ECJ0EF1C104Z	C 0.1UF, 16V	
C1106	ECJ0EB1H102K	C 1000PF, 50V	
C1107	ECJ0EF1C104Z	C 0.1UF, 16V	
C1108	ECJ0EF1C104Z	C 0.1UF, 16V	
C1109	ECJ0EF1C104Z	C 0.1UF, 16V	
C1110	ECJ0EF1C104Z	C 0.1UF, 16V	
C1112	F2G1C4700014	CAPACITOR	
C1113	F2G1C4700014	CAPACITOR	
C1114	ECJ0EF1C104Z	C 0.1UF, 16V	
C1115	ECJ0EF1C104Z	C 0.1UF, 16V	
C1116	ECJ0EF1C104Z	C 0.1UF, 16V	
C1117	F2G1C4700014	CAPACITOR	
C1118	ECJ0EF1C104Z	C 0.1UF, 16V	
C1119	F2G1C4700014	CAPACITOR	
C1120	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1121	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1122	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1123	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1124	EEEHB0J221UP	E 330UF, 6.3V	
C1125	ECJ0EB1C103K	C 0.01UF, 16V	
C1126	EEEHB0J221UP	E 330UF, 6.3V	
C1127	ECJ0EB1C103K	C 0.01UF, 16V	
C1128	EEEHB0J221UP	E 330UF, 6.3V	
C1129	ECJ0EB1C103K	C 0.01UF, 16V	
C1130	ECJ0EF1C104Z	C 0.1UF, 16V	
C1131	ECJ1VB1H472K	C 4700PF, K, 50V	
C1132	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1133	F2G0J3300014	CAPACITOR	
C1134	ECJ0EF1C104Z	C 0.1UF, 16V	
C1135	F2G0J3300014	CAPACITOR	
C1136	EEEHB1C101P	CAPACITOR	
C1137	ECJ0EF1C104Z	C 0.1UF, 16V	
C1138	ECJ0EF1C104Z	C 0.1UF, 16V	
C1139	ECJ0EB1C103K	C 0.01UF, 16V	
C1140	ECJ0EB1C103K	C 0.01UF, 16V	
C1141	ECJ0EB1H102K	C 1000PF, 50V	
C1142	ECJ0EF1C104Z	C 0.1UF, 16V	
C1143	ECJ0EF1C104Z	C 0.1UF, 16V	
C1144	EEEFK0J221P	CAPACITOR	
C1145	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1146	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1147	F2G0J3300014	CAPACITOR	
C1148	ECJ0EB1C103K	C 0.01UF, 16V	
C1149	F2G0J3300014	CAPACITOR	
C1150	ECJ0EB1C103K	C 0.01UF, 16V	
C1151	F2G0J3300014	CAPACITOR	
C1152	ECJ0EB1C103K	C 0.01UF, 16V	
C1153	ECJ1VF1A225Z	CAPACITOR	
C1154	ECJ0EB1H102K	C 1000PF, 50V	
C1155	ECJ1VF1A225Z	CAPACITOR	
C1156	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1157	ECJ1VF1E104Z	C 0.1UF, Z, 25V	

Ref. No.	Part No.	Part Name & Description	Remarks
C1158	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1159	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1160	ECJ0EF1C104Z	C 0.1UF, 16V	
C1161	ECJ2FF1A106Z	C 10UF, 10V	
C1162	ECJ2FF1A106Z	C 10UF, 10V	
C1163	ECJ0EF1C104Z	C 0.1UF, 16V	
C1164	ECJ0EF1C104Z	C 0.1UF, 16V	
C1165	ECJ0EB1C103K	C 0.01UF, 16V	
C1166	ECJ2FF1A106Z	C 10UF, 10V	
C1167	ECJ2FF1A106Z	C 10UF, 10V	
C1168	ECJ0EF1C104Z	C 0.1UF, 16V	
C1169	ECJ0EF1C104Z	C 0.1UF, 16V	
C1170	ECJ2FF1A106Z	C 10UF, 10V	
C1171	ECJ0EF1C104Z	C 0.1UF, 16V	
C1172	ECJ0EB1C103K	C 0.01UF, 16V	
C1173	ECJ0EF1C104Z	C 0.1UF, 16V	
C1174	ECJ0EF1C104Z	C 0.1UF, 16V	
C1175	ECJ0EF1C104Z	C 0.1UF, 16V	
C1176	ECJ0EF1C104Z	C 0.1UF, 16V	
C1177	ECJ0EF1C104Z	C 0.1UF, 16V	
C1178	ECJ0EF1C104Z	C 0.1UF, 16V	
C1179	ECJ0EB1H102K	C 1000PF, 50V	
C1180	ECJ2FF1A106Z	C 10UF, 10V	
C1181	ECJ0EF1C104Z	C 0.1UF, 16V	
C1182	ECJ0EF1C104Z	C 0.1UF, 16V	
C1183	ECJ0EF1C104Z	C 0.1UF, 16V	
C1184	ECJ0EF1C104Z	C 0.1UF, 16V	
C1186	ECJ2FF1C475Z	CAPACITOR	
C1188	ECJ0EF1C104Z	C 0.1UF, 16V	
C1189	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1190	ECJ1VF1C104Z	C 0.1UF, Z, 16V	F100NTU, F100U
C1191	ECJ0EB1H102K	C 1000PF, 50V	
C1193	ECJ1VF1C104Z	C 0.1UF, Z, 16V	F100NTU, F100U
C1194	ECJ0EF1C104Z	C 0.1UF, 16V	
C1195	ECJ1VB1C823K	C 0.82UF, 16V	
C1196	ECJ0EB1C103K	C 0.01UF, 16V	
C1197	ECJ1VF1A225Z	CAPACITOR	
C1198	ECJ1VB1H472K	C 4700PF, K, 50V	
C1199	ECJ0EB1C103K	C 0.01UF, 16V	
C1200	ECJ0EF1C104Z	C 0.1UF, 16V	
C1201	ECJ1VC1H180J	CAPACITOR	F100NTU, F100U
C1202	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1203	ECJ0EF1C104Z	C 0.1UF, 16V	
C1205	ECJ1VF1A225Z	CAPACITOR	
C1207	ECJ1VC1H180J	CAPACITOR	F100NTU, F100U
C1209	ECJ0EF1C104Z	C 0.1UF, 16V	
C1211	ECJ0EF1C104Z	C 0.1UF, 16V	
C1213	ECJ2FF1A106Z	C 10UF, 10V	F100NTU, F100U
C1214	EEFCD0D101R	CAPACITOR	
C1216	ECJ0EB1H102K	C 1000PF, 50V	
C1218	ECJ0EB1H102K	C 1000PF, 50V	
C1221	ECJ1VF1A225Z	CAPACITOR	
C1223	ECJ1VC1H561J	CAPACITOR	F100NTU, F100U
C1225	ECJ0EF1C104Z	C 0.1UF, 16V	
C1227	EEEHB0J101P	E 100UF, 6.3V	
C1228	ECJ0EF1C104Z	C 0.1UF, 16V	
C1229	ECJ0EF1C104Z	C 0.1UF, 16V	
C1230	ECJ0EF1C104Z	C 0.1UF, 16V	
C1231	ECJ1VF1A225Z	CAPACITOR	
C1233	ECJ1VF1A225Z	CAPACITOR	
C1235	ECJ0EF1C104Z	C 0.1UF, 16V	
C1236	ECJ2FF1A106Z	C 10UF, 10V	
C1237	F2G1C4700014	CAPACITOR	
C1238	ECJ0EF1C104Z	C 0.1UF, 16V	
C1239	F2G0J3300014	CAPACITOR	F100NTU, F100U
C1242	ECJ2FF1A106Z	C 10UF, 10V	
C1243	ECJ2FF1A106Z	C 10UF, 10V	
C1244	ECJ0EF1C104Z	C 0.1UF, 16V	
C1245	F2G1C4700014	CAPACITOR	
C1246	ECJ1VF1E104Z	C 0.1UF, Z, 25V	
C1248	ECJ1VF1A105Z	C 1UF, Z, 50V	F100NTU, F100U
C1249	ECJ2FF1A106Z	C 10UF, 10V	F100NTU, F100U
C1250	ECJ1VB1C333K	CAPACITOR	F100NTU, F100U

Ref. No.	Part No.	Part Name & Description	Remarks
C1252	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU, F100U
C1253	ECJ1VF1C104Z	C 0.1UF, Z, 16V	F100NTU, F100U
C1256	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C1257	ECJ1VF1C104Z	C 0.1UF, Z, 16V	F100NTU, F100U
C1258	ECJ0EF1C104Z	C 0.1UF, 16V	
C1260	ECJ0EF1C104Z	C 0.1UF, 16V	
C1262	ECJ0EF1C104Z	C 0.1UF, 16V	
C1265	ECJ0EF1C104Z	C 0.1UF, 16V	
C1267	ECJ0EF1C104Z	C 0.1UF, 16V	
C1268	ECJ0EF1C104Z	C 0.1UF, 16V	
C1269	F1J0J1060004	CAPACITOR	
C1270	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1271	ECJ0EF1C104Z	C 0.1UF, 16V	
C1272	ECJ0EF1C104Z	C 0.1UF, 16V	
C1273	ECJ0EF1C104Z	C 0.1UF, 16V	
C1274	ECJ1VC1H221J	CAPACITOR	
C1276	ECJ0EB1H102K	C 1000PF, 50V	
C1278	ECJ1VC1H150J	C 15PF, J, 50V	
C1279	ECJ1VC1H150J	C 15PF, J, 50V	
C1280	ECJ2FF1C475Z	CAPACITOR	
C1281	ECJ0EF1C104Z	C 0.1UF, 16V	
C1283	ECJ0EF1C104Z	C 0.1UF, 16V	
C1284	F1J1E105A197	CAPACITOR	
C1286	F2G0J4700010	CAPACITOR	
C1287	F2G0J4700010	CAPACITOR	
C1288	F2G1A221A030	CAPACITOR	
C1289	ECJ0EF1C104Z	C 0.1UF, 16V	
C1291	ECJ0EF1C104Z	C 0.1UF, 16V	
C1292	ECJ0EF1C104Z	C 0.1UF, 16V	
C1293	ECJ0EF1C104Z	C 0.1UF, 16V	
C1294	ECJ0EF1C104Z	C 0.1UF, 16V	
C1295	ECJ0EF1C104Z	C 0.1UF, 16V	
C1296	ECJ0EF1C104Z	C 0.1UF, 16V	
C1297	ECJ0EF1C104Z	C 0.1UF, 16V	
C1298	ECJ0EF1C104Z	C 0.1UF, 16V	
C1299	ECJ0EF1C104Z	C 0.1UF, 16V	
C1300	ECJ0EF1C104Z	C 0.1UF, 16V	
C1301	ECJ0EF1C104Z	C 0.1UF, 16V	
C1302	ECJ0EF1C104Z	C 0.1UF, 16V	
C1303	ECJ0EF1C104Z	C 0.1UF, 16V	
C1304	ECJ0EF1C104Z	C 0.1UF, 16V	
C1305	ECJ0EF1C104Z	C 0.1UF, 16V	
C1306	ECJ0EF1C104Z	C 0.1UF, 16V	
C1307	ECJ0EF1C104Z	C 0.1UF, 16V	
C1308	ECJ0EF1C104Z	C 0.1UF, 16V	
C1309	ECJ0EF1C104Z	C 0.1UF, 16V	
C1310	ECJ0EF1C104Z	C 0.1UF, 16V	
C1311	ECJ0EF1C104Z	C 0.1UF, 16V	
C1312	ECJ0EF1C104Z	C 0.1UF, 16V	
C1313	ECJ0EF1C104Z	C 0.1UF, 16V	
C1314	ECJ0EF1C104Z	C 0.1UF, 16V	
C1315	ECJ0EF1C104Z	C 0.1UF, 16V	
C1316	ECJ0EF1C104Z	C 0.1UF, 16V	
C1317	ECJ0EF1C104Z	C 0.1UF, 16V	
C1318	ECJ0EF1C104Z	C 0.1UF, 16V	
C1319	ECJ0EF1C104Z	C 0.1UF, 16V	
C1320	ECJ0EF1C104Z	C 0.1UF, 16V	
C1321	ECJ0EF1C104Z	C 0.1UF, 16V	
C1322	ECJ0EF1C104Z	C 0.1UF, 16V	
C1323	ECJ0EF1C104Z	C 0.1UF, 16V	
C1324	ECJ0EF1C104Z	C 0.1UF, 16V	
C1325	ECJ0EF1C104Z	C 0.1UF, 16V	
C1326	ECJ0EF1C104Z	C 0.1UF, 16V	
C1327	ECJ0EF1C104Z	C 0.1UF, 16V	
C1328	ECJ0EF1C104Z	C 0.1UF, 16V	
C1329	ECJ0EF1C104Z	C 0.1UF, 16V	
C1330	ECJ0EF1C104Z	C 0.1UF, 16V	
C1331	ECJ0EF1C104Z	C 0.1UF, 16V	
C1332	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1334	ECJ0EF1C104Z	C 0.1UF, 16V	
C1335	ECJ2FF1A106Z	C 10UF, 10V	
C1336	ECJ1VC1H330J	CAPACITOR	
C1337	ECJ1VC1H330J	CAPACITOR	

Ref. No.	Part No.	Part Name & Description	Remarks
C1338	ECJ0EB1C103K	C 0.01UF, 16V	
C1339	ECJ0EF1C104Z	C 0.1UF, 16V	
C1340	F2G0J3300014	CAPACITOR	
C1341	ECJ0EF1C104Z	C 0.1UF, 16V	
C1342	ECJ0EB1C103K	C 0.01UF, 16V	
C1343	ECJ0EF1C104Z	C 0.1UF, 16V	
C1344	F2G0J3300014	CAPACITOR	
C1345	ECJ0EB1C103K	C 0.01UF, 16V	
C1346	F2G0J3300014	CAPACITOR	
C1347	ECJ0EF1C104Z	C 0.1UF, 16V	
C1348	ECJ1VF1A225Z	CAPACITOR	
C1349	ECJ0EB1H102K	C 1000PF, 50V	
C1350	ECJ0EF1C104Z	C 0.1UF, 16V	
C1351	ECJ0EF1C104Z	C 0.1UF, 16V	
C1352	EEEHB0G221P	E 220UF, 4V	
C1353	EEEHB0G221P	E 220UF, 4V	
C1354	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C1355	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C1356	ECJ2VF1C105Z	C 1UF, Z, 16V	
C1357	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C1363	ECJ0EF1C104Z	C 0.1UF, 16V	
C1365	ECJ1VF1A105Z	C 1UF, Z, 50V	
C1369	ECJ1VF1C104Z	C 0.1UF, Z, 16V	
C1370	ECJ0EF1C104Z	C 0.1UF, 16V	
C1471	ECJ0EF1C104Z	C 0.1UF, 16V	
C1701	EEEFK1C101P	CAPACITOR	F100NTU/E/EA
C1702	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1703	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1704	EEEFK0J221P	CAPACITOR	F100NTU/E/EA
C1705	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1706	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1707	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1708	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1709	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1710	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1711	EEEFK0J221P	CAPACITOR	F100NTU/E/EA
C1712	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1713	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1714	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1715	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1716	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1717	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1718	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1719	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1720	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1721	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1722	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1723	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1724	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1725	ECJ1VC1H100D	CAPACITOR	F100NTU/E/EA
C1726	ECJ1VC1H100D	CAPACITOR	F100NTU/E/EA
C1727	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1728	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1729	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1730	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1731	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1732	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1733	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1734	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1735	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1736	EEEFK0J221P	CAPACITOR	F100NTU/E/EA
C1737	EEEFK0J221P	CAPACITOR	F100NTU/E/EA
C1738	ECJ1VB1H103K	C 0.01UF, K, 50V	F100NTU/E/EA
C1739	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1741	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1742	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1743	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1745	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1746	EEEFK0J221P	CAPACITOR	F100NTU/E/EA
C1747	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1749	EEEFK0J221P	CAPACITOR	F100NTU/E/EA
C1751	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1752	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA

Ref. No.	Part No.	Part Name & Description	Remarks
C1753	ECJ1VB1C104K	CAPACITOR	F100NTU/E/EA
C1754	ECJ1VB1C104K	CAPACITOR	F100NTU/E/EA
C1761	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1762	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1763	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1764	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1765	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1766	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1767	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1768	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1769	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1770	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1771	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1772	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1773	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1774	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1775	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1776	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1777	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1778	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1779	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1780	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1781	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1782	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1783	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1784	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1785	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1786	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1787	ECJ1VB1H103K	C 0.01UF, K, 50V	F100NTU/E/EA
C1788	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1789	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1790	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1791	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1792	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1793	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1794	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1795	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1796	ECJ0EB1H102K	C 1000PF, 50V	F100NTU/E/EA
C1797	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1798	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1799	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1800	EEEFK0J221P	CAPACITOR	F100NTU/E/EA
C1801	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1802	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1803	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1804	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1805	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1806	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1807	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1808	EEEFK0J221P	CAPACITOR	F100NTU/E/EA
C1809	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1810	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1811	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1812	ECJ2VB1H472K	CAPACITOR	F100NTU/E/EA
C1813	EEFUD0J101R	CAPACITOR	F100NTU/E/EA
C1814	EEFCD0D101R	CAPACITOR	F100NTU/E/EA
C1815	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1816	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1817	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1818	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1819	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1820	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1821	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1822	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1823	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1824	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1825	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1826	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1827	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1828	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1829	ECJ1VB1C104K	CAPACITOR	F100NTU/E/EA
C1830	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1831	EEEFK0J221P	CAPACITOR	F100NTU/E/EA

Ref. No.	Part No.	Part Name & Description	Remarks
C1832	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1833	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1834	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1835	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1836	ECJ1VB1H222K	CAPACITOR	F100NTU/E/EA
C1837	ECJ1VC1H102J	C 1000PF, J, 50V	F100NTU/E/EA
C1838	ECJ1VC1H101J	C 100PF, J, 50V	F100NTU/E/EA
C1839	F1J1A106A024	CAPACITOR	F100NTU/E/EA
C1840	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1841	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1842	ECJ1VB0J474K	CAPACITOR	F100NTU/E/EA
C1843	F1J0J2260002	CAPACITOR	F100NTU/E/EA
C1846	F1J0J2260002	CAPACITOR	F100NTU/E/EA
C1847	ECJ1VB1H103K	C 0.01UF, K, 50V	F100NTU/E/EA
C1848	EEEFK0J221P	CAPACITOR	F100NTU/E/EA
C1849	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1850	EEEFK1C101P	CAPACITOR	F100NTU/E/EA
C1851	EEEFK0J221P	CAPACITOR	F100NTU/E/EA
C1852	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1853	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1854	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1855	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1856	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1857	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1858	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1859	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1860	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1861	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1862	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1863	F1L3D1020008	CAPACITOR	F100NTU/E/EA
C1864	F1L3D1020008	CAPACITOR	F100NTU/E/EA
C1867	EEEFK0J221P	CAPACITOR	F100NTU/E/EA
C1868	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1869	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1870	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1871	ECJ1VB0J105K	C 1UF,Z, 6.3V	F100NTU/E/EA
C1872	ECJ2VC1H101J	CAPACITOR	F100NTU/E/EA
C1873	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1874	F1J0J106A013	CAPACITOR	F100NTU/E/EA
C1875	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1876	ECJ1VB1H222K	CAPACITOR	F100NTU/E/EA
C1877	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C1878	ECJ0EF1C104Z	C 0.1UF, 16V	F100NTU/E/EA
C3001	ECJ3YF1C475Z	C 4.7UF, Z, 16V	
C3002	ECJ3YF1C475Z	C 4.7UF, Z, 16V	
C3003	ECJ3YF1C475Z	C 4.7UF, Z, 16V	
C3004	ECJ3YF1C475Z	C 4.7UF, Z, 16V	
C3005	ECJ3YF1C475Z	C 4.7UF, Z, 16V	
C3006	ECJ1VF1C105Z	C 0.01UF, Z, 16V	
C3007	ECJ1VF1C105Z	C 0.01UF, Z, 16V	
C3008	ECJ1VB1H472K	C 4700PF, K, 50V	
C3009	ECJ1VB1H472K	C 4700PF, K, 50V	
C3010	ECJ2FF1A106Z	C 10UF, 10V	
C3011	ECJ2FF1A106Z	C 10UF, 10V	
C3016	ECJ1VF1A105Z	C 1UF, Z, 50V	
C3018	ECJ2FF1A106Z	C 10UF, 10V	
C3019	ECJ1VF1A105Z	C 1UF, Z, 50V	
C3020	ECJ1VF1A105Z	C 1UF, Z, 50V	
C3021	ECJ2FF1A106Z	C 10UF, 10V	
C3022	ECJ1VF1A105Z	C 1UF, Z, 50V	
C3023	ECJ0EF1C104Z	C 0.1UF, 16V	
C3024	ECJ0EF1C104Z	C 0.1UF, 16V	
C3025	ECJ0EF1C104Z	C 0.1UF, 16V	
C3026	ECJ0EF1C104Z	C 0.1UF, 16V	
C3027	ECJ0EF1C104Z	C 0.1UF, 16V	
C3028	ECJ0EF1C104Z	C 0.1UF, 16V	
C3029	ECJ0EF1C104Z	C 0.1UF, 16V	
C3030	ECJ0EF1C104Z	C 0.1UF, 16V	
C9101	ECQU2A105MLA	P 1UF, M,250V	⚠
C9102	F1BAH102A024	CAPACITOR	⚠
C9103	F1BAH102A024	CAPACITOR	⚠
C9104	ECQU2A334MLA	CAPACITOR	⚠
C9603	F0CZZ4740003	CAPACITOR	

Ref. No.	Part No.	Part Name & Description	Remarks
C9610	F0C2E1050008	CAPACITOR	
C9615	F0C3C4720003	CAPACITOR	
C9617	F0C3C3320002	CAPACITOR	
C9618	F0C2J1540007	CAPACITOR	
C9619	F0C2J1540007	CAPACITOR	
[OTHERS]			
A1	K1MY36BA0193	36P CONNECTOR	
A2	K1MY36BA0193	36P CONNECTOR	
A3	K1MY36BA0193	36P CONNECTOR	
A4	K1KA07BA0014	7P CONNECTOR	
A5	K1KA05BA0014	5P CONNECTOR	
A6	K1KA15BA0051	15P CONNECTOR	
A7	K1KA03BA0047	3P CONNECTOR	
A8	K1MY14BA0008	14P CONNECTOR	
A10	K1KA03BA0047	3P CONNECTOR	
A11	K1KA02BA0047	2P CONNECTOR	
A12	K1KA02BA0047	2P CONNECTOR	
A13	K1KA02BA0014	2P CONNECTOR	
A15	K1KA04BA0047	4P CONNECTOR	
A16	K1KA03BA0014	3P CONNECTOR	
A17	K1KA03BA0014	3P CONNECTOR	
A18	K1KA03BA0014	3P CONNECTOR	
A19	K1KA04BA0047	4P CONNECTOR	
A20	K1MN22AA0041	CONNECTOR	
A21	K1KA03BA0047	3P CONNECTOR	
A23	K1KA06BA0014	6P CONNECTOR	
A24	K1KA04BA0014	4P CONNECTOR	
A25	K1KA06BA0014	6P CONNECTOR	F100NTU, F100U
A26	K1KA04BA0014	4P CONNECTOR	
A27	K1KA06A00454	6P CONNECTOR	
A31	K1NA09E00050	9P CONNECTOR	F100NTU/E/EA
A32	K1KA10AA0033	10P CONNECTOR	F100NTU/E/EA
A33	K1KA06A00454	6P CONNECTOR	F100NTU/E/EA
G1	K1MN22AA0041	CONNECTOR	
F9101-1	K3GE1ZA00010	FUSE HOLDER	
F9101-2	K3GE1ZA00010	FUSE HOLDER	
F9101	K5D632BNA005	FUSE	⚠
JK1001	K1CB205B0007	TERMINAL	
JK1003	K2HA2YYB0001	TERMINAL	
JK1004	K1FB115B0103	TERNINAL CONNECTOR	
JK1005	K1FB115B0102	D-SUB (15PIN)	
JK1006	K2HA304B0010	TERMINAL	
JK1701	K2LC1YYB0009	TERMINAL	F100NTU/E/EA
JK3001	K2HC1YYB0006	TERMINAL	
JK3002	K2HC1YYB0006	TERMINAL	
JK3003	K2HC1YYB0005	TERMINAL	
JK3004	K1FY109B0011	TERMINAL	
JK3005	K1FY109B0011	TERMINAL	
JK9101	K2AH3B000016	AC INLET	⚠
JS1001	ERJ6GEY0R00	M 0 OHM,J,1/10W	
JS1002	ERJ6GEY0R00	M 0 OHM,J,1/10W	
JS1003	ERJ6GEY0R00	M 0 OHM,J,1/10W	
JS1004	ERJ6GEY0R00	M 0 OHM,J,1/10W	
JS1005	ERJ6GEY0R00	M 0 OHM,J,1/10W	
S9602	A9BZ00000013	SPARK GAP	
SW9101	K0AAKA000014	AC SWITCH	⚠
X1001	H0J255500001	CRYSTAL	
X1002	H0J270500116	CRYSTAL	
X1004	H0J327200114	CRYSTAL	
X1005	H0J327200115	CRYSTAL	F100NTU, F100U
X1701	H1A6605B0008	CRYSTAL	F100NTU/E/EA
X1702	H1A1225B0015	CRYSTAL	F100NTU/E/EA
X1703	H0J250500082	CRYSTAL	F100NTU/E/EA
ZA9101	K9ZZ00000424	LUG TERMINAL	
RTL	TNPA4209	CIRCUIT BOARD G	⚠
RTL	TXANP01QEXZ	CIRCUIT BOARD A	⚠ F100NTU
	TXANP01VKE2	CIRCUIT BOARD A	⚠ F100NTE/NTEA
	TXANP01QEYZ	CIRCUIT BOARD A	⚠ F100U
	TXANP01VKE3	CIRCUIT BOARD A	⚠ F100E/EA

Ref. No.	Part No.	Part Name & Description	Remarks
RTL	TXANP02QEXZ	CIRCUIT BOARD-K ASSY	⚠
	ETXMM659MCH	CIRCUIT BOARD-P	⚠
	TNPA4210	CIRCUIT BOARD S1	⚠
	TNPA4211	CIRCUIT BOARD R	⚠
	TNPA4212	CIRCUIT BOARD P1	⚠
	TNPA4240	CIRCUIT BOARD F	⚠
	TNPA4276	CIRCUIT BOARD Z	⚠
	TNPA4277	CIRCUIT BOARD L	⚠
	TNPA4295	CIRCUIT BOARD S2	⚠
	TNPA4296	CIRCUIT BOARD D	⚠
	TNPA4297	CIRCUIT BOARD M1	⚠
	TNPA4298	CIRCUIT BOARD M2	⚠
	TNPA4350	CIRCUIT BOARD M3	⚠
	TXANP04QEXZ	BALLAST UNIT ASSY	⚠

Control Commands
PT-F100NT**/F100**

Using the Serial Terminals

1. Basic Format

Transmission from the computer begins with STX, then the command, parameter and ETX are sent in this order. Add parameters according to the details of control.

Basic control command (without parameter)

Start (STX)	Command	End (ETX)
1 byte	3 bytes	1 byte

Basic control command (with parameters)

Start (STX)	Command	Separator (colon)	Parameters	End (ETX)
1 byte	3 bytes	1 byte	Undefined length	1 byte

Response (Callback) of the basic control command

In the period when the command can be accepted

Differs according to each command.

In the period when commands cannot be accepted or the command does not exist

Hexadecimal	02h	45h	52h	34h	30h	31h	03h
Character		E	R	4	0	1	

In case of the parameter error

Hexadecimal	02h	45h	52h	34h	30h	32h	03h
Character		E	R	4	0	2	

Notes:

- When sending several commands, be sure to wait for a response from the projector, and send the next command after 0.5 seconds or more pass.
- It might take time by the time the response returns because the command is processed in the projector. Set the time-out to 10 seconds or longer.

2. Basic Control Command

Explanatory notes
○: Yes (Enable)
×: No (Disable)

2.1. Power ON (Lamp ON)

Hexadecimal	02h	50h	4Fh	4Eh	03h
Character		P	O	N	

■ Respone (Callback)
In the period when the command can be accepted (This command in power-on condition is included)

Hexadecimal	02h	50h	4Fh	4Eh	03h
Character		P	O	N	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	○	○	○	△

■ Note:
- When you confirm whether to have succeeded in power-on, confirm it by QPW (Query Power) command after receiving the callback of PON command.
- When REMOTE is effective, ER401 is returned as a response (callback).

2.2. Power OFF (Standby)

Hexadecimal	02h	50h	4Fh	46h	03h
Character		P	O	F	

■ Response (Callback)
In the period when the command can be accepted (This command in power-off condition is included)

Hexadecimal	02h	50h	4Fh	46h	03h
Character		P	O	F	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	○	○	○	△

■ Notes:
- When you confirm whether to have succeeded in power-off, confirm it by QPW (Query Power) command after receiving the callback of POF command.
- When REMOTE is effective, ER401 is returned as a response (callback).

2.3. AUTO SETUP

Hexadecimal	02h	4Fh	41h	53h	03h
Character		O	A	S	

■ Response (Callback)
In the period when the command can be accepted

Hexadecimal	02h	4Fh	41h	53h	03h
Character		O	A	S	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
×	×	×	×	○

■ Note:
- This command is acceptable only when RGB1 or RGB2 is selected and RGB PC signals are input. In other cases, ER401 is returned.

2.4. SHUTTER key

Hexadecimal	02h	4Fh	53h	48h	3Ah	*1	03h
Character		O	S	H	:	*2	

■ Parameters (*1, *2)

	Shutter OFF	Shutter ON
Hexadecimal	30h	31h
Character	0	1

■ Response (Callback)
In the period when the command can be accepted

Hexadecimal	02h	4Fh	53h	48h	3Ah	*1	03h
Character		O	S	H	:	*2	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
×	×	○	○	○

2.5. FREEZE key

Hexadecimal	02h	4Fh	46h	5Ah	3Ah	*1	03h
Character		O	F	Z	:	*2	

■ Parameters (*1, *2)

	Freeze OFF	Freeze ON
Hexadecimal	30h	31h
Character	0	1

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	4Fh	46h	5Ah	3Ah	*1	03h
Character		O	F	Z	:	*2	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
×	×	×	×	○

2.6. Input Change

Hexadecimal	02h	49h	49h	53h	3Ah	*1	*3	*5	03h
Character		I	I	S	:	*2	*4	*6	

■ Parameters (*1, *2, *3, *4, *5, *6)

	COMPUTER 1			COMPUTER 2		
Hexadecimal	52h	47h	31h	52h	47h	32h
Character	R	G	1	R	G	2
	VIDEO			S-VIDEO		
Hexadecimal	56h	49h	44h	53h	56h	44h
Character	V	I	D	S	V	D
	COMPONENT			NETWORK		
Hexadecimal	59h	55h	56h	4Eh	57h	50h
Character	Y	U	V	N	W	P

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	49h	49h	53h	3Ah	*1	*3	*5	03h
Character		I	I	S	:	*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
×	×	○	○	△

■ Notes:

- REMOTE is given to priority. Calls back ER402 if the input change by REMOTE is effective.
- Parameter NWP is available only for PT-F100NT**.

2.7. MENU key

Hexadecimal	02h	4Fh	4Dh	4Eh	03h
Character		O	M	N	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	4Fh	4Dh	4Eh	03h
Character		O	M	N	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	○	×	○

2.8. ENTER key

Hexadecimal	02h	4Fh	45h	4Eh	03h
Character		O	E	N	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	4Fh	45h	4Eh	03h
Character		O	E	N	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	○	×	○

2.9. Up (↑) key

Hexadecimal	02h	4Fh	43h	55h	03h
Character		O	C	U	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	4Fh	43h	55h	03h
Character		O	C	U	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	○	×	○

2.10. Down (↓) key

Hexadecimal	02h	4Fh	43h	44h	03h
Character		O	C	D	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	4Fh	43h	44h	03h
Character		O	C	D	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	○	×	○

2.11. Left (←) key

Hexadecimal	02h	4Fh	43h	4Ch	03h
Character		O	C	L	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	4Fh	43h	4Ch	03h
Character		O	C	L	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	○	×	○

2.12. Right (→) key

Hexadecimal	02h	4Fh	43h	52h	03h
Character		O	C	R	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	4Fh	43h	52h	03h
Character		O	C	R	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	○	×	○

2.13. DEFAULT key

Hexadecimal	02h	4Fh	53h	54h	03h
Character		O	S	T	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	4Fh	53h	54h	03h
Character		O	S	T	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
×	×	○	×	○

2.14. Volume + key

Hexadecimal	02h	41h	55h	55h	03h
Character		A	U	U	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	41h	55h	55h	03h
Character		A	U	U	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
×	×	×	×	○

2.15. Volume - key

Hexadecimal	02h	41h	55h	44h	03h
Character		A	U	D	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	41h	55h	44h	03h
Character		A	U	D	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
×	×	×	×	○

2.16. INDEX WINDOW key

Hexadecimal	02h	4Fh	49h	58h	03h
Character		O	I	X	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	4Fh	49h	58h	03h
Character		O	I	X	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
×	×	×	×	○

2.17. DIGITAL ZOOM + key

Hexadecimal	02h	44h	5Ah	55h	03h
Character		D	Z	U	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	44h	5Ah	55h	03h
Character		D	Z	U	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
×	×	×	×	○

2.18. DIGITAL ZOOM - key

Hexadecimal	02h	44h	5Ah	44h	03h
Character		D	Z	D	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	44h	5Ah	44h	03h
Character		D	Z	D	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
×	×	×	×	○

2.19. Picture Mode

Hexadecimal	02h	56h	50h	4Dh	3Ah	*1	*3	*5	03h
Character		V	P	M	:	*2	*4	*6	

■ Parameters (*1, *2, *3, *4, *5, *6)

	DYNAMIC			NATURAL			STANDARD			BLACKBOARD		
Hexadecimal	44h	59h	4Eh	4Eh	41h	54h	53h	54h	44h	42h	42h	44h
Character	D	Y	N	N	A	T	S	T	D	B	B	D

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	56h	50h	4Dh	3Ah	*1	*3	*5	03h
Character		V	P	M	:	*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
×	×	×	×	○

2.20. Audio Volume Level

Hexadecimal	02h	41h	56h	4Ch	3Ah	*1	*3	*5	03h
Character		A	V	L	:	*2	*4	*6	

■ Parameters (*1, *2, *3, *4, *5, *6)

	0			1			2		
Hexadecimal	30h	30h	30h	30h	30h	31h	30h	30h	32h
Character	0	0	0	0	0	1	0	0	2
	61			62			63		
Hexadecimal	30h	36h	31h	30h	36h	32h	30h	36h	33h
Character	0	6	1	0	6	2	0	6	3

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	41h	56h	4Ch	3Ah	*1	*3	*5	03h
Character		A	V	L	:	*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
×	×	×	×	○

2.21. Set Date

Hexadecimal	02h	54h	53h	44h	3Ah	*y1	*y2	*y3
Character		T	S	D	:			
Hexadecimal	*y4	*m1	*m2	*d1	*D2	*w	03h	
Character								

■ Parameters

*y1 - *y4: Year (4 digits)
*m1, *m2: Month (2 digits)
*d1, *d2: Day (2 digits)
*w: Day of the week (Mon = 1, Tue = 2, Wed = 3, Thu = 4, Fri = 5, Sat = 6, Sun = 7)
Set it by UTC (Coordinated Universal Time).
Example: Thursday, June 29, 2006

	*y1	*y2	*y3	*y4	*m1	*m2	*d1	*D2	*w
Hexadecimal	32h	30h	30h	36h	30h	36h	32h	39h	34h
Character	2	0	0	6	0	6	2	9	4

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	54h	53h	44h	3Ah	*y1	*y2	*y3
Character		T	S	D	:			
Hexadecimal	*y4	*m1	*m2	*d1	*d2	*w	03h	
Character								

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
×	○	○	○	○

2.22. Set Time

Hexadecimal	02h	54h	53h	54h	3Ah	*h1
Character		T	S	T	:	
Hexadecimal	*h2	*m1	*m2	*s1	*s2	03h
Character						

■ Parameters

*h1, *h2: Hour (2 digits)
*m1, *m2 : Minute (2 digits)
*s1, *s2 : Second (2 digits)
Set it by UTC (Coordinated Universal Time).
Example: 3 seconds at 3:45 p.m.

	*h1	*h2	*m1	*m2	*s1	*s2
Hexadecimal	31h	35h	34h	35h	30h	33h
Character	1	5	4	5	0	3

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	54h	53h	54h	3Ah	*h1
Character		T	S	T	:	
Hexadecimal	*h2	*m1	*m2	*s1	*s2	03h
Character						

■ Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
×	○	○	○	○

2.23. Query Power

Hexadecimal	02h	51h	50h	57h	03h
Character		Q	P	W	

■ Response (Callback)

OFF

Hexadecimal	02h	30h	30h	31h	03h
Character		0	0	0	

ON

Hexadecimal	02h	30h	30h	31h	03h
Character		0	0	1	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	○	○	○	○

2.24. Query Lamp Status

Hexadecimal	02h	51h	24h	53h	03h
Character		Q	$	S	

■ Response (Callback)

Lamp OFF

Hexadecimal	02h	30h	03h
Character		0	

In turning ON

Hexadecimal	02h	31h	03h
Character		1	

Lamp ON

Hexadecimal	02h	32h	03h
Character		2	

In turning OFF

Hexadecimal	02h	33h	03h
Character		3	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	○	○	○	○

2.25. Query Input Change

Hexadecimal	02h	51h	49h	4Eh	03h
Character		Q	I	N	

■ Response (Callback)

COMPUTER 1

Hexadecimal	02h	52h	47h	31h	03h
Character		R	G	1	

COMPUTER 2

Hexadecimal	02h	52h	47h	32h	03h
Character		R	G	2	

VIDEO

Hexadecimal	02h	56h	49h	44h	03h
Character		V	I	D	

S- VIDEO

Hexadecimal	02h	53h	56h	44h	03h
Character		S	V	D	

COMPONENT

Hexadecimal	02h	59h	55h	56h	03h
Character		Y	U	V	

NETWORK

Hexadecimal	02h	4Eh	57h	50h	03h
Character		N	W	P	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	○	○	○

2.26. Query Audio Volume Level

Hexadecimal	02h	51h	41h	56h	03h
Character		Q	A	V	

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	03h
Character		*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	○	○	○

■ Parameters (*1, *2, *3, *4, *5, *6)

	0			1			2		
Hexadecimal	30h	30h	30h	30h	30h	31h	30h	30h	32h
Character	0	0	0	0	0	1	0	0	2
	61			62			63		
Hexadecimal	30h	36h	31h	30h	36h	32h	30h	36h	33h
Character	0	6	1	0	6	2	0	6	3

2.27. Query Color

Hexadecimal	02h	51h	56h	43h	03h
Character		Q	V	C	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	03h
Character		*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	×	○	○

■ Parameters (*1, *2, *3, *4, *5, *6)

	-32			-31			-30		
Hexadecimal	2Dh	33h	32h	2Dh	33h	31h	2Dh	33h	30h
Character	-	3	2	-	3	1	-	3	0
	30			31			32		
Hexadecimal	30h	33h	30h	30h	33h	31h	30h	33h	32h
Character	0	3	0	0	3	1	0	3	2

2.28. Query Tint

Hexadecimal	02h	51h	56h	54h	03h
Character		Q	V	T	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	03h
Character		*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	×	○	○

■ Parameters (*1, *2, *3, *4, *5, *6)

	-32			-31			-30		
Hexadecimal	2Dh	33h	32h	2Dh	33h	31h	2Dh	33h	30h
Character	-	3	2	-	3	1	-	3	0
	30			31			32		
Hexadecimal	30h	33h	30h	30h	33h	31h	30h	33h	32h
Character	0	3	0	0	3	1	0	3	2

2.29. Query Brightness

Hexadecimal	02h	51h	56h	42h	03h
Character		Q	V	B	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	03h
Character		*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	×	○	○

■ Parameters (*1, *2, *3, *4, *5, *6)

	-32			-31			-30		
Hexadecimal	2Dh	33h	32h	2Dh	33h	31h	2Dh	33h	30h
Character	-	3	2	-	3	1	-	3	0
	30			31			32		
Hexadecimal	30h	33h	30h	30h	33h	31h	30h	33h	32h
Character	0	3	0	0	3	1	0	3	2

2.30. Query Contrast

Hexadecimal	02h	51h	56h	52h	03h
Character		Q	V	R	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	03h
Character		*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	×	○	○

■ Parameters (*1, *2, *3, *4, *5, *6)

	-32			-31			-30		
Hexadecimal	2Dh	33h	32h	2Dh	33h	31h	2Dh	33h	30h
Character	-	3	2	-	3	1	-	3	0
	30			31			32		
Hexadecimal	30h	33h	30h	30h	33h	31h	30h	33h	32h
Character	0	3	0	0	3	1	0	3	2

2.31. Query Sharpness

Hexadecimal	02h	51h	56h	53h	03h
Character		Q	V	S	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	03h
Character		*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	×	○	○

■ Parameters (*1, *2, *3, *4, *5, *6)

	-08			-07			-06		
Hexadecimal	2Dh	30h	38h	2Dh	30h	37h	2Dh	30h	36h
Character	-	0	8	-	0	7	-	0	6
	13			14			015		
Hexadecimal	30h	31h	33h	30h	31h	34h	30h	31h	35h
Character	0	1	3	0	1	4	0	1	5

2.32. Query White Balance - R

Hexadecimal	02h	51h	57h	52h	03h
Character		Q	W	R	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	03h
Character		*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	×	○	○

■ Parameters (*1, *2, *3, *4, *5, *6)

	-32			-31			-30		
Hexadecimal	2Dh	33h	32h	2Dh	33h	31h	2Dh	33h	30h
Character	-	3	2	-	3	1	-	3	0
	30			31			32		
Hexadecimal	30h	33h	30h	30h	33h	31h	30h	33h	32h
Character	0	3	0	0	3	1	0	3	2

2.33. Query White Balance - G

Hexadecimal	02h	51h	57h	47h	03h
Character		Q	W	G	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	03h
Character		*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	×	○	○

■ Parameters (*1, *2, *3, *4, *5, *6)

	-32			-31			-30		
Hexadecimal	2Dh	33h	32h	2Dh	33h	31h	2Dh	33h	30h
Character	-	3	2	-	3	1	-	3	0
	30			31			32		
Hexadecimal	30h	33h	30h	30h	33h	31h	30h	33h	32h
Character	0	3	0	0	3	1	0	3	2

2.34. Query White Balance - B

Hexadecimal	02h	51h	57h	42h	03h
Character		Q	W	B	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	03h
Character		*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	×	○	○

■ Parameters (*1, *2, *3, *4, *5, *6)

	-32			-31			-30		
Hexadecimal	2Dh	33h	32h	2Dh	33h	31h	2Dh	33h	30h
Character	-	3	2	-	3	1	-	3	0
	30			31			32		
Hexadecimal	30h	33h	30h	30h	33h	31h	30h	33h	32h
Character	0	3	0	0	3	1	0	3	2

2.35. Query Horizontal Position

Hexadecimal	02h	51h	48h	50h	03h
Character		Q	H	P	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	03h
Character		*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	×	○	○

■ Parameters (*1, *2, *3, *4, *5, *6)

	-127				-126				-125			
Hexadecimal	2Dh	31h	32h	37h	2Dh	31h	32h	36h	2Dh	31h	32h	35h
Character	-	1	2	7	-	1	2	6	-	1	2	5
	125				126				127			
Hexadecimal	31h	32h	35h		31h	32h	36h		31h	32h	37h	
Character	1	2	5		1	2	6		1	2	7	

2.36. Query Vertical Position

Hexadecimal	02h	51h	56h	50h	03h
Character		Q	V	P	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	03h
Character		*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	×	○	○

■ Parameters (*1, *2, *3, *4, *5, *6)

	-64			-63			-62		
Hexadecimal	2Dh	36h	34h	2Dh	36h	33h	2Dh	36h	32h
Character	-	6	4	-	6	3	-	6	2
	62			63			64		
Hexadecimal	36h	32h		36h	33h		36h	34h	
Character	6	2		6	3		6	4	

2.37. Query Clock Phase

Hexadecimal	02h	51h	43h	50h	03h
Character		Q	C	P	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	03h
Character		*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	×	○	○

■ Parameters (*1, *2, *3, *4, *5, *6)

	-16			-15			-14		
Hexadecimal	2Dh	31h	36h	2Dh	31h	36h	2Dh	31h	36h
Character	-	1	6	-	1	6	-	1	4
	14			15			16		
Hexadecimal	30h	31h	34h	30h	31h	35h	30h	31h	36h
Character	0	1	4	0	1	5	0	1	6

■ Note:

- This command is acceptable only when the input is COMPUTER 1, COMPUTER 2 or COMPONENT. In other cases, ER401 is returned.

2.38. Query Dot Clock

Hexadecimal	02h	51h	44h	43h	03h
Character		Q	D	C	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	03h
Character		*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	×	○	○

■ Parameters (*1, *2, *3, *4, *5, *6)

	-32			-31			-30		
Hexadecimal	2Dh	33h	32h	2Dh	33h	31h	2Dh	33h	30h
Character	-	3	2	-	3	1	-	3	0
	30			31			32		
Hexadecimal	30h	33h	30h	30h	33h	31h	30h	33h	32h
Character	0	3	0	0	3	1	0	3	2

■ Note:

- This command is acceptable only when the input is COMPUTER 1 or COMPUTER. In other cases, ER401 is returned.

2.39. Query Picture Mode

Hexadecimal	02h	51h	50h	4Dh	03h
Character		Q	P	M	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	03h
Character		*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	○	○	○

■ Parameters (*1, *2, *3, *4, *5, *6)

	DYNAMIC			NATURAL			STANDARD			BLACKBOARD		
Hexadecimal	44h	59h	4Eh	4Eh	41h	54h	53h	54h	44h	42h	42h	44h
Character	D	Y	N	N	A	T	S	T	D	B	B	D

2.40. Query Color Temperature

Hexadecimal	02h	51h	54h	45h	03h
Character		Q	T	E	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	03h
Character		*2	*4	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	×	○	○

■ Parameters (*1, *2, *3, *4)

	LOW	STANDARD	HIGH
Hexadecimal	30h	31h	32h
Character	0	1	2

2.41. Query Keystone

Hexadecimal	02h	51h	4Bh	53h	03h
Character		Q	K	S	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	*7	03h
Character		*2	*4	*6	*8	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	○	○	○

■ Parameters (*1, *2, *3, *4, *5, *6, *7, *8)

	-32			-31			-30		
Hexadecimal	2Dh	33h	32h	2Dh	33h	31h	2Dh	33h	30h
Character	-	3	2	-	3	1	-	3	0
	30			31			32		
Hexadecimal	30h	33h	30h	30h	33h	31h	30h	33h	32h
Character	0	3	0	0	3	1	0	3	2

2.42. Query SHUTTER

Hexadecimal	02h	51h	53h	48h	03h
Character		Q	S	H	

■ Response (Callback)

OFF

Hexadecimal	02h	31h	03h
Character		0	

ON

Hexadecimal	02h	31h	03h
Character		1	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	○	○	○

2.43. Query FREEZE

Hexadecimal	02h	51h	46h	5Ah	03h
Character		Q	F	Z	

■ Response (Callback)

OFF

Hexadecimal	02h	31h	03h
Character		0	

ON

Hexadecimal	02h	31h	03h
Character		1	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	○	○	○

2.44. Query Installation

Hexadecimal	02h	51h	53h	50h	03h
Character		Q	S	P	

■ Response (Callback)

FRONT-F

Hexadecimal	02h	30h	03h
Character		0	

REAR-F

Hexadecimal	02h	31h	03h
Character		1	

FRONT-C

Hexadecimal	02h	32h	03h
Character		2	

REAR-C

Hexadecimal	02h	33h	03h
Character		3	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	○	○	○	○

2.45. Query Display Language

Hexadecimal	02h	51h	4Ch	47h	03h
Character		Q	L	G	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	03h
Character		*2	*4	*6	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	○	○	○	○

■ Parameters (*1, *2, *3, *4, *5, *6)

	English			German			French		
Hexadecimal	45h	4Eh	47h	44h	45h	55h	46h	52h	41h
Character	E	N	G	D	E	U	F	R	A
	Spanish			Italian			Japanese		
Hexadecimal	45h	53h	50h	49h	54h	4Ch	4Ah	50h	4Eh
Character	E	S	P	I	T	L	J	P	N
	Chinese			Russian			Korean		
Hexadecimal	43h	48h	49h	52h	55h	53h	4Bh	4Fh	52h
Character	C	H	I	R	U	S	K	O	R
	Portuguese			Swedish			Norwegian		
Hexadecimal	50h	4Fh	52h	53h	56h	45h	4Eh	4Fh	52h
Character	P	O	R	S	V	E	N	O	R
	Danish			Polish			Czech		
Hexadecimal	44h	41h	4Eh	50h	4Fh	4Ch	43h	45h	53h
Character	D	A	N	P	O	L	C	E	S
	Hungarian			Thai					
Hexadecimal	4Dh	41h	47h	54h	48h	41h			
Character	M	A	G	T	H	A			

2.46. Query Lamp Runtime

Hexadecimal	02h	51h	24h	4Ch	03h
Character		Q	$	L	

■ Response (Callback)

In the period when the command can be accepted

Hexadecimal	02h	*1	*3	*5	*7	03h
Character		*2	*4	*6	*8	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	○	○	○	○

■ Parameters (*1, *2, *3, *4, *5, *6, *7, *8)

	0 h				1 h			
Hexadecimal	30h	30h	30h	30h	30h	30h	30h	31h
Character	0	0	0	0	0	0	0	1
	9998 h				9999 h			
Hexadecimal	39h	39h	39h	38h	39h	39h	39h	39h
Character	9	9	9	8	9	9	9	9

■ Note:

・It returns with 0000 when the lamp runtime cannot be obtained.

2.47. Query Date

Hexadecimal	02h	51h	47h	44h	03h
Character		Q	G	D	

■ Response (Callback)

Hexadecimal	02h	*y1	*y2	*y3	*y4	*m1	*m2	*d1	*D2	*w	03h
Character											

■ Parameters

*y1 - *y4: Year (4 digits)
*m1, *m2: Month (2 digits)
*d1, *d2: Day (2 digits)
*w: Day of the week (Mon = 1, Tue = 2, Wed = 3, Thu = 4, Fri = 5, Sat = 6, Sun = 7)
Set it by UTC (Coordinated Universal Time).
Example: Saturday, April 21, 2007

	*y1	*y2	*y3	*y4	*m1	*m2	*d1	*D2	*w
Hexadecimal	32h	30h	30h	37h	30h	34h	32h	31h	31h
Character	2	0	0	7	0	4	2	1	1

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	○	○	○	○

2.48. Query Time

Hexadecimal	02h	51h	47h	54h	03h
Character		Q	G	T	

■ Response (Callback)

Hexadecimal	02h	*h1	*h2	*m1	*m2	*s1	*s2	03h
Character								

■ Parameters

*h1, *h2: Hour (2 digits)
*m1, *m2 : Minute (2 digits)
*s1, *s2 : Second (2 digits)
Set it by UTC (Coordinated Universal Time).
Example: 3 seconds at 3:45 p.m.

	*h1	*h2	*m1	*m2	*s1	*s2
Hexadecimal	31h	35h	34h	35h	30h	33h
Character	1	5	4	5	0	3

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	○	○	○	○

2.49. Query Filter Remaining Time

Hexadecimal	02h	51h	46h	49h	3Ah	35h	03h
Character		Q	F	I	:	5	

■ Response(Callback)

Example:1500hours

Hexadecimal	02h	31h	35h	30h	30h	03h
Character		1	5	0	0	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	○	○	○

2.50. Closed Caption (only for F100U/F100NTU)

Hexadecimal	02h	4Fh	43h	43h	3Ah	*1	03h
Character		O	C	C	:	*2	

■ Parameters(*1, *2)

	OFF	CC1	CC2	CC3	CC4
Hexadecimal	30h	31h	32h	33h	34h
Character	0	1	2	3	4

■ Response(Callback)

In the period when the command can be accepted

Hexadecimal	02h	4Fh	43h	43h	3A	*1	03h
Character		O	C	C	:	*2	

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
×	×	×	×	○

■ Notes:

・It is invalid during SIDE BY SIDE, FREEZE, INDEX WINDOW, and DIGITAL ZOOM.

2.51. Query Closed Caption (only for F100U/F100NTU)

Hexadecimal	02h	51h	43h	43h	03h
Character		Q	C	C	

■ Response(Callback)

	OFF			CC1			CC2		
Hexadecimal	02h	30h	03h	02h	31h	03h	02h	32h	03h
Character		0			1			2	
	CC3			CC4					
Hexadecimal	02h	33h	03h	02h	34h	03h			
Character		3			4				

Acceptability

SECURITY	STANDBY	NO SIGNAL	SHUTTER	REMOTE
○	×	×	○	○